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A Garden for the 21st Century

The Master Plan for

**STRYBING
ARBORETUM &
BOTANICAL
GARDENS**

**Golden Gate Park
San Francisco, California**

prepared for:

**The
Strybing
Arboretum
Society**

prepared by:

**Tito Patri & Associates
Landscape Architects**

**Fernau & Hartman
Architects**

1995

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STRYBING ARBORETUM SOCIETY
Golden Gate Park
Ninth Avenue at Lincoln Way
San Francisco, CA 94122
(415) 661-1316

A Garden for the 21st Century

The Master Plan for

STRYBING ARBORETUM & BOTANICAL GARDENS

1995

Acknowledgments:

This Master Plan was prepared in cooperation with the San Francisco Recreation and Parks Commission.

Strybing Arboretum Society:

Laurie S. Goldman, Executive Director

Trustees, 1994-1995:

Susan Addison, President
Richard Achuck
Margery Anson
Jean Blomberg
Dr. Dennis E. Breedlove
Fred Brousseau
Ellen M. Courtien
Mary Fishman
Patricia Gordon
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Carole D. Haes
Mrs. Jules M. Heumann

Dixon Long
William H. Madison
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Alexandra Scott
Dr. Kent O. Sims
Pat Stocker
Walden R. Valen
Dr. Cherie Wetzel
Charles F. Willis

Trustees, 1993-94:

Jean Blomberg, President
Robert Burns
Bartley C. Deamer
Mrs. Donald McNeil

John F. O'Brien
Arthur C. Patterson
John J. Spring

Acknowledgments Continued:

Advisory Committee:

Beatrice V. Bowles
Sara U. Duskin
Rhoda Goldman

Peter L. Newton
Arthur C. Patterson

Master Plan Steering Committee:

Co-chairs:

Laurie S. Goldman, Executive Director, Strybing Arboretum Soc
Walden Valen, Director of Gardens

Susan Addison
Eldon Beck
Diana Colby
James Cooney
Charles Davis
Betsy Flack
Elisabeth Gunther

Deborah Learner
Bill Madison
Susan Nervo
Peter Pelavin
Pat Stocker
Alexandra Scott

San Francisco Recreation & Parks Commission:

Jack Immendorf, President
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Bella Farrow
Elizabeth McArdle-Solomon
Angelo Quaranta

Vincent J. Rovetti
Santiago Ruiz

San Francisco Recreation & Parks Department:

Mary Burns, General Manager
James Cooney, Assistant Superintendent of Parks
Deborah Learner, Park Planner
Walden Valen, Director of Gardens

Consultants:

Tito Patri & Associates
Landscape Architects

William Mah Engineers
Mechanical Engineers

Fernau & Hartman
Architects

Bhatia Associates
Electrical Engineers

John Gaccione
Signage Design

Beach McCarthy Donaldson
Costing Consultants

Steven Tipping & Associates
Structural Engineers

Hygienetics Environmental
Services, Inc.
Asbestos Abatement

Pat Castor
Copy Editor

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A Garden for the 21st Century

The Master Plan for

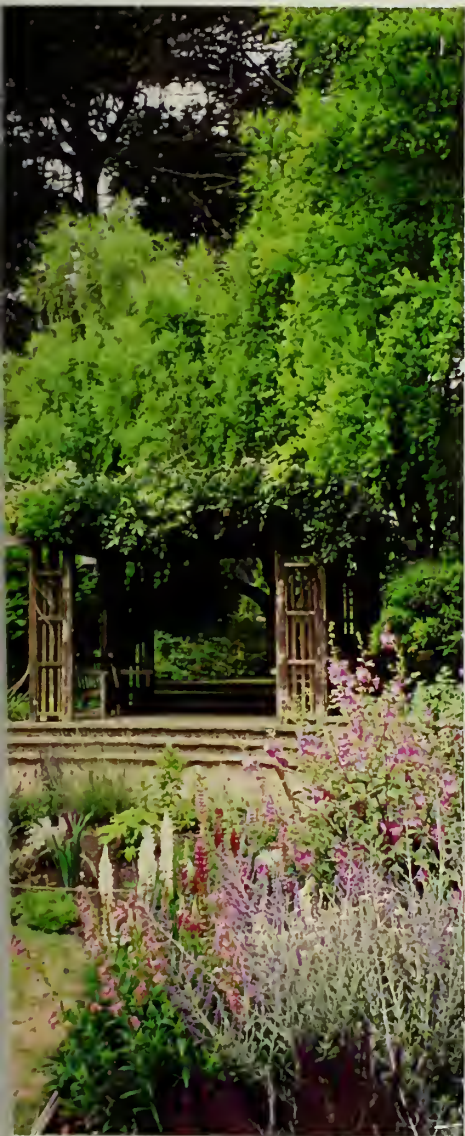
STRYBING ARBORETUM & BOTANICAL GARDENS

1995

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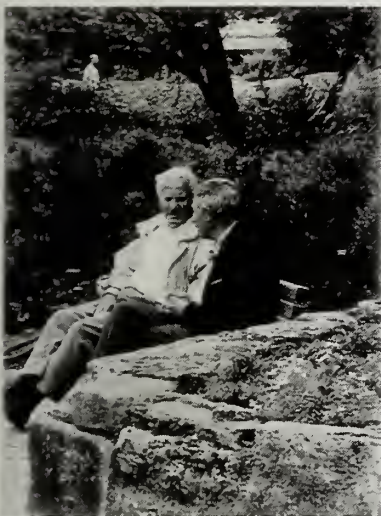
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Introduction



Vision for the Coming Decade



The leadership of Strybing Arboretum and Botanical Gardens has commissioned and produced a comprehensive master plan to:

- *Achieve a broad local and international reputation for Strybing Arboretum and Botanical Gardens' premier collections.*
- *Maintain and enhance a setting of exceptional beauty, that makes the Gardens a magnet for many types of visitors.*
- *Create a distinctive identity based on a collection of plants from around the world suited to the central coastal region of California and the San Francisco Bay Area.*
- *Stimulate increased awareness of the value of plants in the lives of all people by promoting the concept of community responsibility for the conservation of the natural world through outreach activities, displays and educational programs.*
- *Provide opportunities for the professional and scientific communities to utilize the Gardens for research and professional activities. Maintain and expand a network of professional communication with similar institutions in North America and around the world.*

The Mission

The mission of Strybing Arboretum and Botanical Gardens is to:

- *Display plants from around the world suited to the central coastal region of California and to the San Francisco Bay Area.*
- *Provide educational and interpretive programs that promote public awareness of plants and the environment.*
- *Offer a place of reflection, enjoyment and relaxation for the public.*



SUMMARY

Introduction

Strybing Arboretum and Botanical Gardens has been called "the most beautiful garden in North America, public or private." Set in San Francisco's verdant Golden Gate Park, these world-famous Gardens consist of 75-acres of landscaped gardens, forests and meadows exhibiting over 7,000 varieties of plants from the temperate climates of the world. The cool, foggy microclimate of San Francisco permits collections to be grown outdoors, including such rarities as the New World Cloud Forest and a great variety of Mediterranean climate gardens. Little more than one hundred years ago, the land Strybing now occupies was part of a great area of Pacific sand dunes. Today, at the turn of the century, human effort and vision have transformed this landscape into a nexus of botanical, horticultural and environmental information for over half a million visitors each year.



The importance of the botanical collections at the Gardens is complemented by the importance of providing public access to and understanding of these collections. In an age of dwindling natural resources and concern for the environment, education at Strybing Arboretum and Botanical Gardens is dedicated to the urgent mission of increasing the awareness of the value of plants in the lives of all people. The Gardens promote the concept of community responsibility for the conservation of the natural world through outreach activities, displays and educational programs, including the 16,000 volume Helen Crocker Russell Library of Horticulture, informal plant introductions and plant sales, interpretive tours, classes and lectures, publications and signage and gardening /ecology programs for schoolchildren. The Gardens also provide the scientific and professional communities with opportunities for research.

Opened to the public in 1940, the Gardens are owned by the City of San Francisco and operated by a public/private partnership of the San Francisco Recreation and Park Department and the nonprofit Strybing Arboretum Society,



MASTER PLAN

STRYBING ARBORETUM & BOTANICAL GARDENS
SAN FRANCISCO, CALIFORNIA

sponsored by
THE STRYBING ARBORETUM SOCIETY
in cooperation with
THE SAN FRANCISCO RECREATION & PARK COMMISSION
landscape architect
TITO PATRI & ASSOCIATES
architect
FERNAU & HARTMAN

Renovation

& World Conservation
Habitats

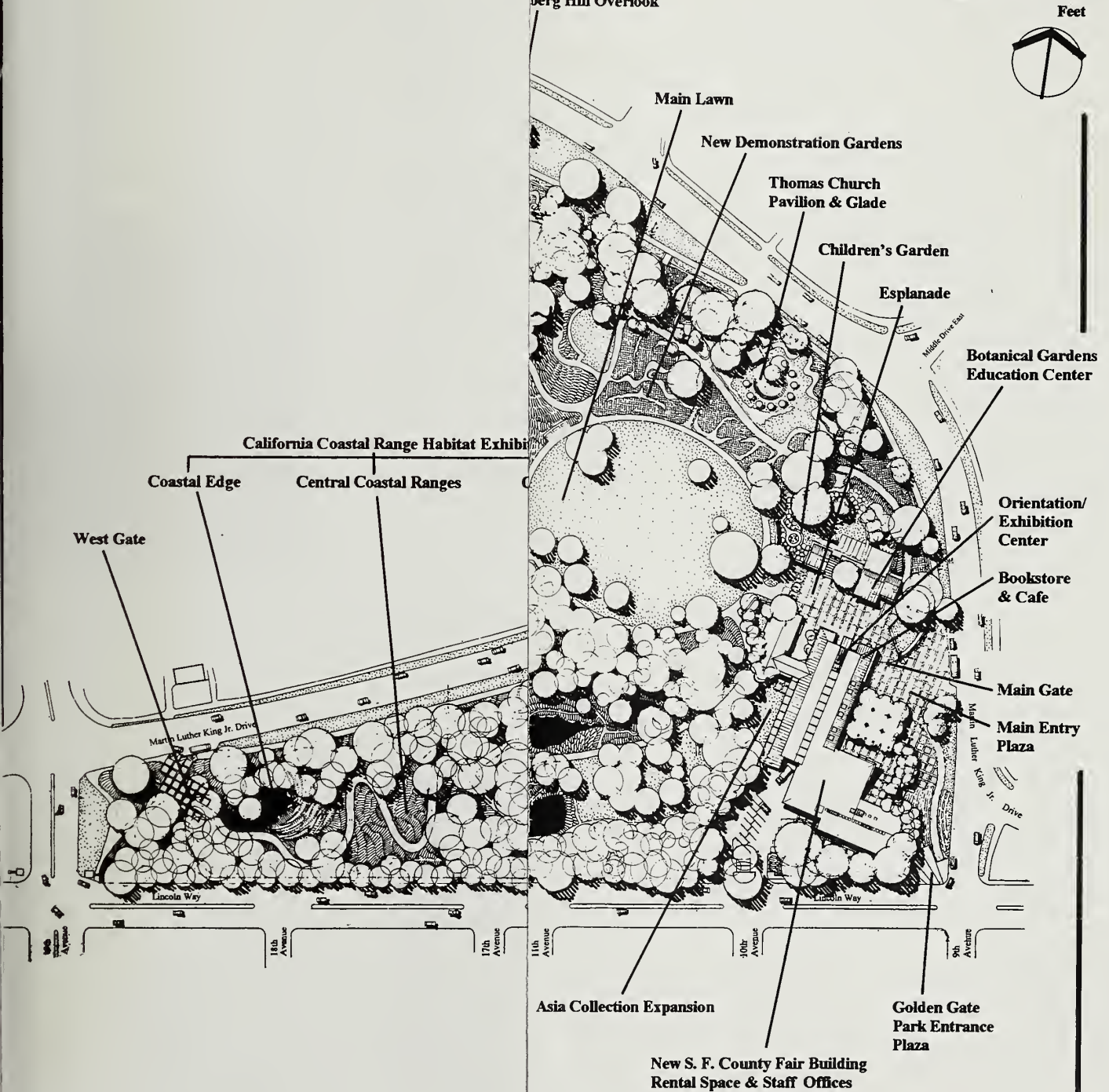
Grass Hill Overlook

ILLUSTRATIVE MAP

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Feet

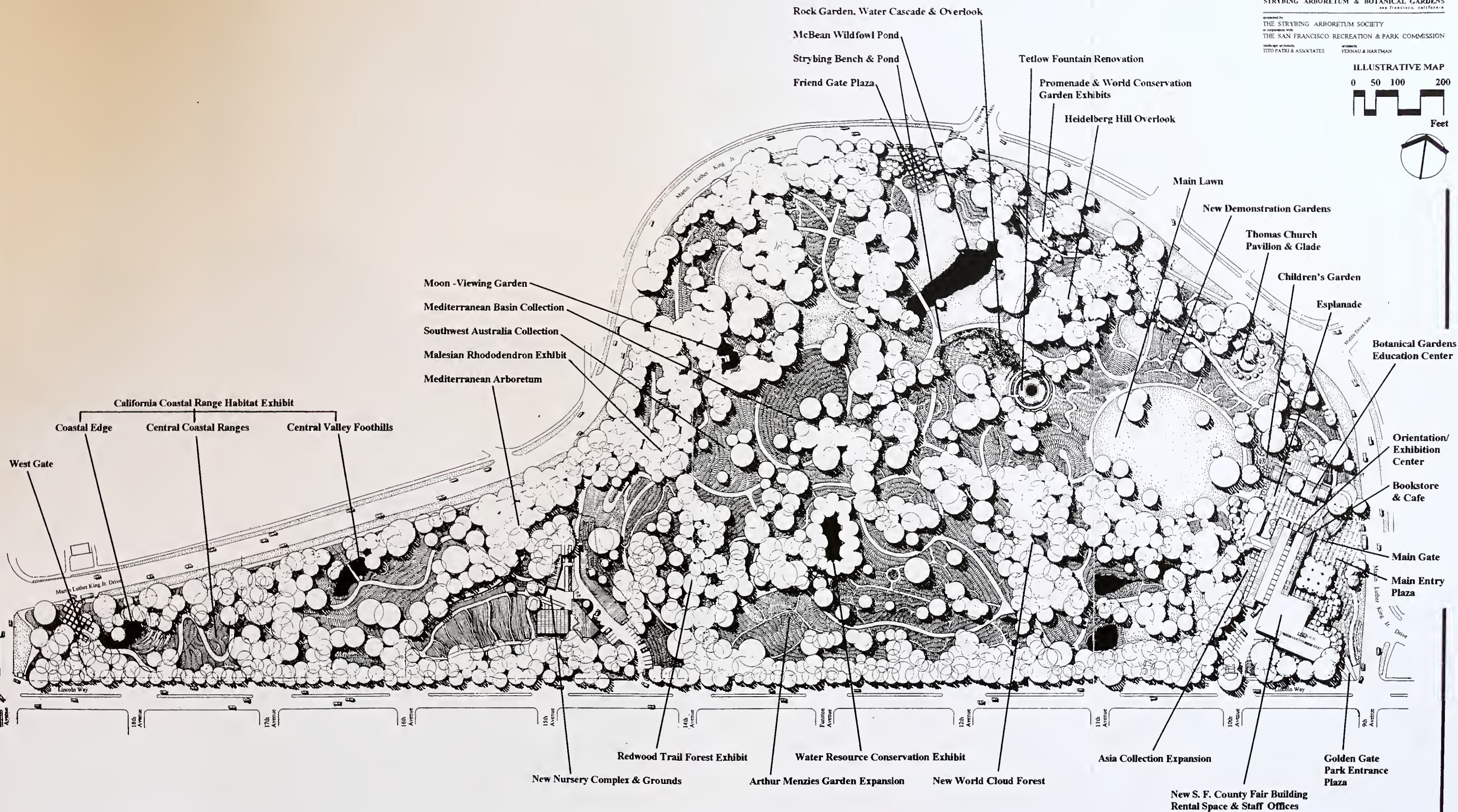


ILLUSTRATIVE MAP

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Feet



established in 1955. The Garden for the 21st Century Master Plan was commissioned by the Strybing Arboretum Society with the approval of the San Francisco Recreation and Park Commission and forms part of the new master plan for Golden Gate Park.

Today, Strybing Arboretum and Botanical Gardens is at a crossroads. The role of botanical gardens in the community, funding resources and the nature and requirements of the Gardens' visitors have all changed radically in the last generation. Strybing's leadership has recognized the necessity of providing a blueprint to insure the future vitality and relevance of this world-famous scientific and cultural institution. The new Master Plan is that guide.

Planning Philosophy



Strybing Arboretum and Botanical Gardens is a mature and widely recognized botanical garden with a unique landscape. For the last thirty-six years, Robert Tetlow's 1959 master plan for the Gardens has governed the development of the landscape. Tetlow's strong east/west axis and vista across the great lawn in particular have become associated with the very essence of these Gardens. From the earliest stages of contemplating the Garden for the 21st Century Master Plan, it was the consensus of Strybing's leadership to respect the historical landscape and to seek a creative plan that would enhance and strengthen the Gardens' distinctive "sense of place." Four fundamental considerations, critical to the Gardens' future viability as an institution, guided the planning efforts.

1. *Create a distinctive visual identity for the Gardens to distinguish them from Golden Gate Park as a whole.*
2. *Provide for the expansion of plant collections and their display.*
3. *Improve access to the Gardens by making the exhibits and educational services more evident and appealing to a broad public.*
4. *Increase sources of financial support for the Gardens and their programs.*



An additional guideline was to use existing structures wherever possible both to keep costs down and to comply with the regulations governing building in Golden Gate Park.

The Plan has been designed as a series of flexible guidelines for gradual development in phases over the next five to ten years. Its scope ranges from innovative plans for new facilities and landscaped collections areas to Garden-wide design guidelines for interpretive signage, paths and visitor amenities. It will be supplemented by "The Strategic Plan for Strybing Arboretum and Botanical Gardens," which addresses issues of governance, fundraising and other sources of revenue, garden maintenance and public programs.

Plan Highlights:

Major design proposals for A Garden for the 21st Century are grouped below according to the perceived need they address. Several, like the plan for the new Nursery, address more than one need.

Identity & Access

The Main Entry Plaza

The landscape outside Strybing's Main Gate will be transformed into a vital horticultural "marketplace" featuring many changing plant displays, "interpretive carts," cobble-style entrance paving and a French bosque of trees. A sweeping, curved gate supporting the name of the Gardens will be anchored by the new Orientation Center and the new Education Wall, which frame the classic design of Robert Tetlow.



The Botanical Gardens Orientation & Exhibition Center

As the primary focus for all visitors to the Gardens and many to Golden Gate Park, the new Center will comprise a light-filled, open, indoor space capable of supporting changeable horticultural, art and historical exhibitions, with monumental garden doors and a projecting awning facing the Esplanade and the Education Wing. Information and membership services as well as the new Bookstore and Cafe adjoin. The Center will occupy the northern wing of the County Fair Building.

The Western Entrance

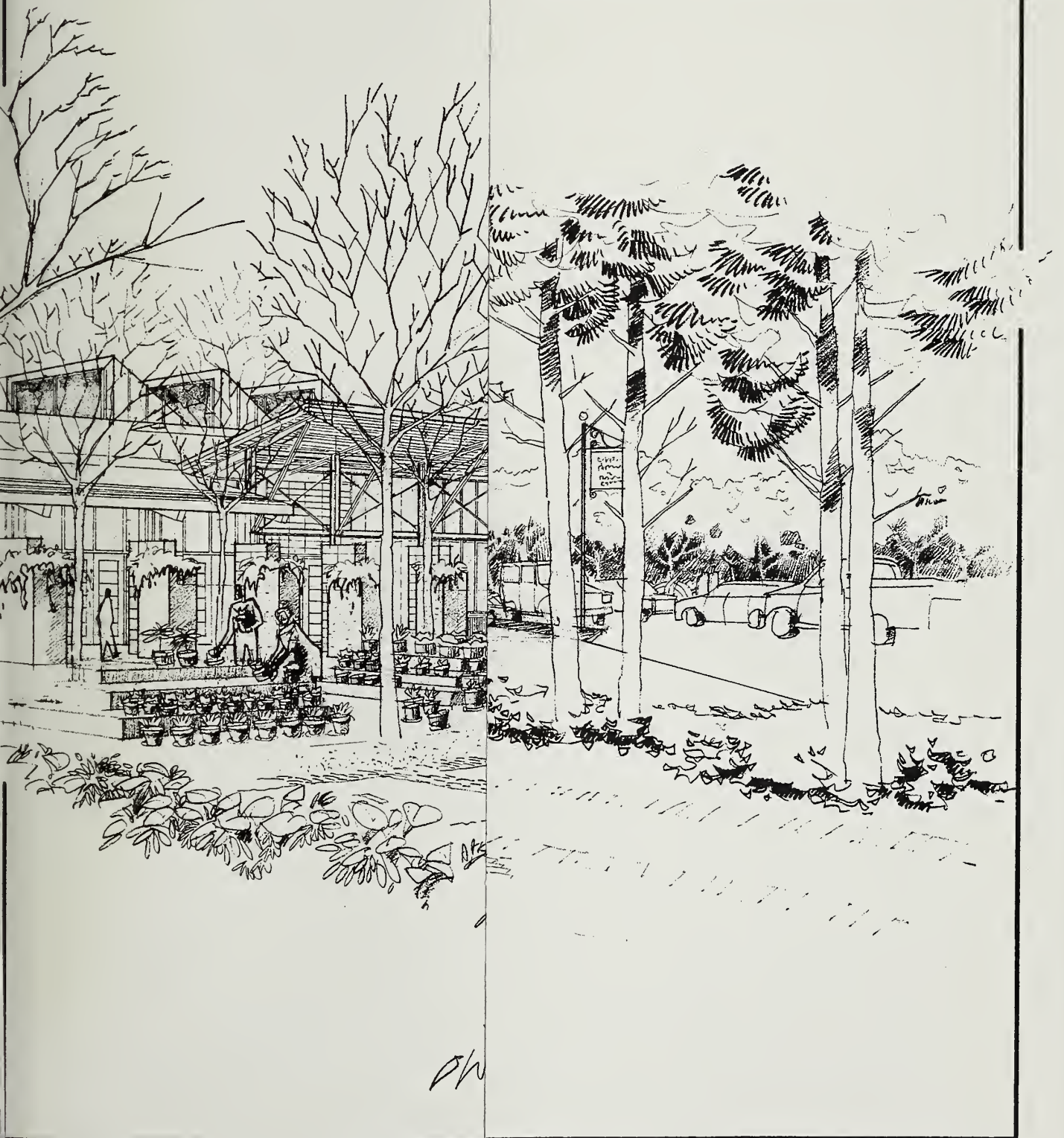
A new entrance will be created near the 19th Avenue end of the Gardens to permit visitors easy access from the west.

The Friend Gate Plaza

The graceful, white Friend Gate will be augmented by an enlarged cobble-style plaza featuring a new overlook toward the main lawn and vistas of the McBean Wildfowl Pond and the Primitive Plant Garden. The Gardens' name will arch over the Gate, offering a distinctive invitation to visitors arriving at Strybing from the Tea Garden and Concourse museums.



MAIN ENTRY PLAZA FROM ENTRY PROMENADE



MAIN ENTRY PLAZA FROM ENTRY PROMENADE



Expanding the Gardens Collections

**The New Botanical
Gardens Nursery**

The old Nursery will be torn down; the area will become a part of the Arthur Menzies Garden of California Native Plants devoted to native plants that enjoy low temperatures. A new "state of the art" Nursery and growing grounds will be relocated to the west and provide adequate space for all propagation needs as well as new research and experimentation programs.

**The California
Coastal Range Habitat**

This new exhibit will occupy the less developed area of the western end of the Gardens, now the site of the Children's Garden. It will explain the concept of a "bio-region" and display plant habitats from the coastal edge, central coastal ranges and Central Valley foothills of California.

The Mediterranean Arboretum

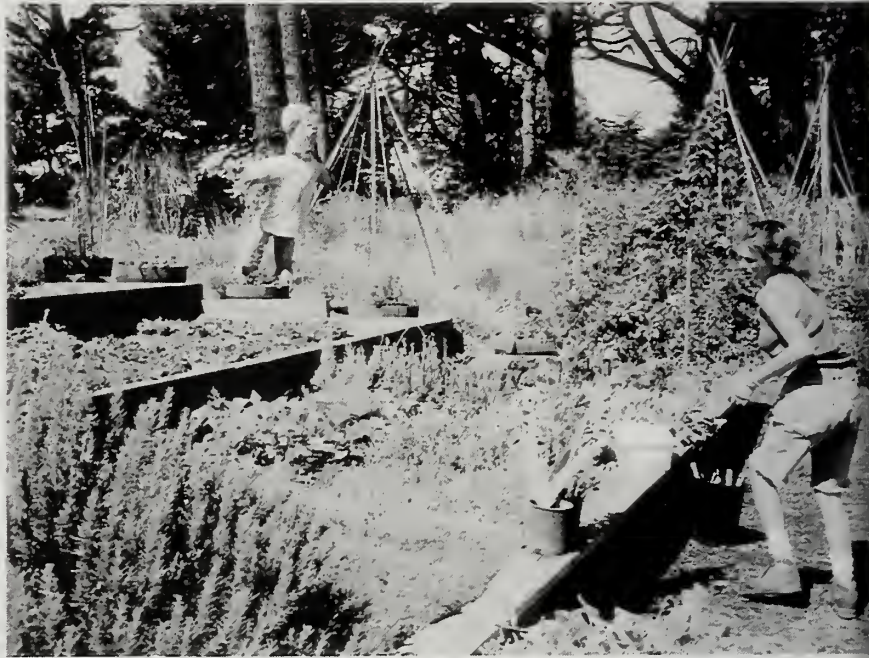
Hugging the western border of the New Nursery growing grounds and providing a much needed windbreak, this exhibit will feature Mediterranean climate trees from around the world.



Promoting Public Awareness of Plants & the Environment Through Education

Botanical Gardens Education Center

For the first time Strybing will have a facility devoted exclusively to botanical garden education programs for the public. Located on the north side of the entrance Esplanade and jutting out over the stone Education Wall, the classroom features a south-facing greenhouse and a large classroom with large roll-up doors facing out on the Children's Garden.



The Children's Garden

Children engaged in gardening and learning about plants is such an inspiring vision for the future that we are making these activities more visible to the public by relocating them from Strybing's western end. Children will grow vegetables, herbs and flowers from around the world while learning about ecology and the environment.

Promenade & World Conservation Garden Exhibits

An arc of special gardens will stretch from the Main Gate to the Friend Gate illustrating critical plant-conservation issues in six continents of the world. These exhibits will provide an ecological perspective of the relationship of plants to environmental conditions and illustrate the concept of the interdependence of plants and people. The gardens will be flanked by a beautiful promenade shaded by trees appropriate to each continent. People passing by on MLK, Jr., Drive outside Strybing will get intriguing views of these gardens through "glimpse gates" set in the outside planted wall.

New Demonstration Gardens

Flanking the northern side of the main oval meadow, the relocated Demonstration Gardens consist of 12 environmental zones allowing space for 22 individual gardens or a more flowing pattern of integrated gardens. Bay Area horticultural groups will be welcome to share in designing and maintaining some of these gardens.



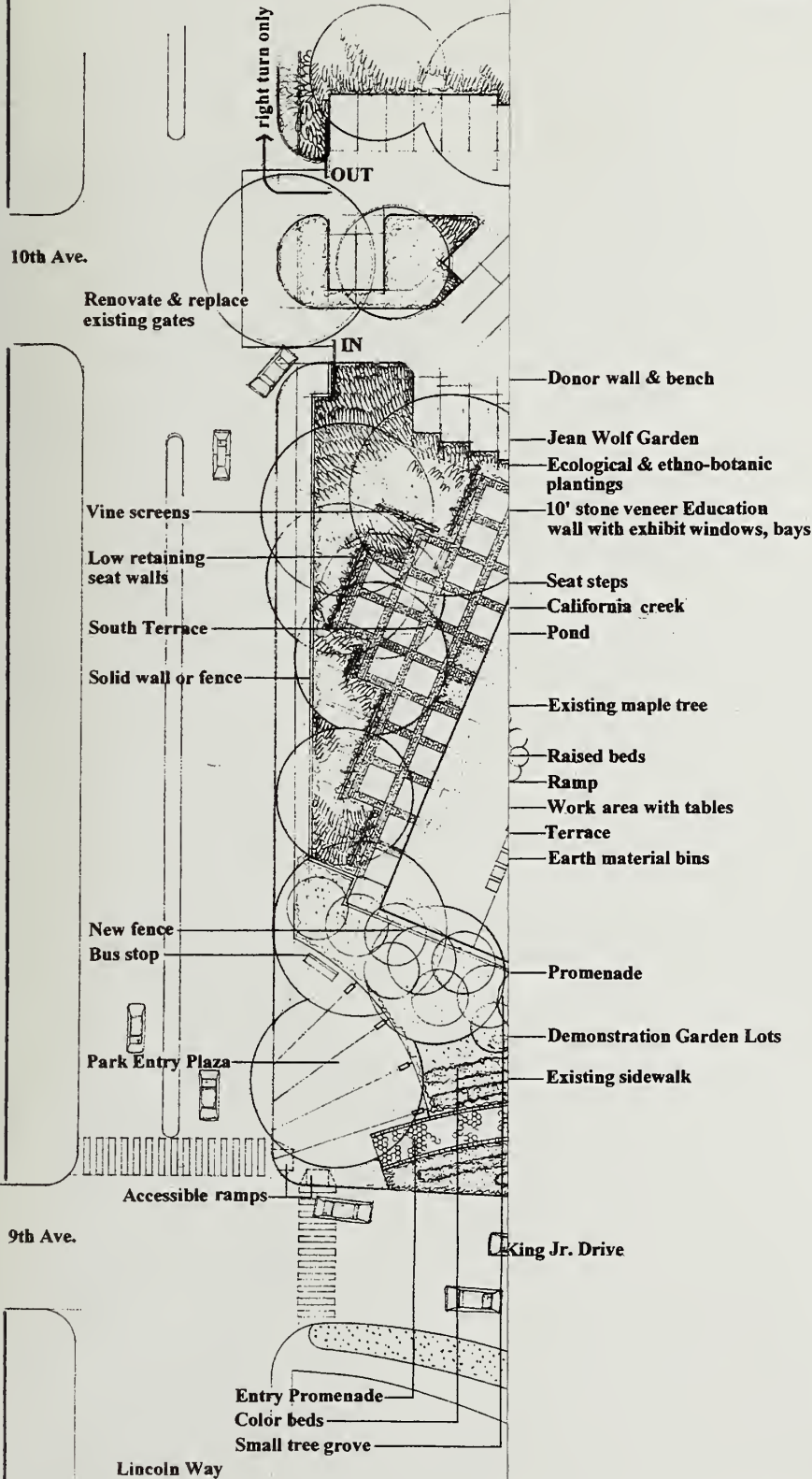
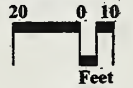
MASTER PLAN

STRYBING ARBORETUM & BOTANICAL GARDENS

san francisco, california

sponsored by:
THE STRYBING ARBORETUM SOCIETY
in cooperation with:
THE SAN FRANCISCO RECREATION & PARK COMMISSION
landscape architect:
TITO PATRI & ASSOCIATES
architect:
FERNAN & HARTMAN

CFB & MAIN GATE AREA



10th Ave.

Renovate & replace
existing gates

IN

Donor wall & bench

Jean Wolf Garden

Ecological & ethno-botanic
plantings

10' stone veneer Education
wall with exhibit windows, bays

Seat steps

California creek

Pond

Existing maple tree

Raised beds

Ramp

Work area with tables

Terrace

Earth material bins

Promenade

Demonstration Garden Lots

Existing sidewalk

Vine screens

Low retaining
seat walls

South Terrace

Solid wall or fence

New fence
Bus stop

Park Entry Plaza

Accessible ramps

9th Ave.

King Jr. Drive

Entry Promenade
Color beds
Small tree grove

Lincoln Way



MASTER PLAN

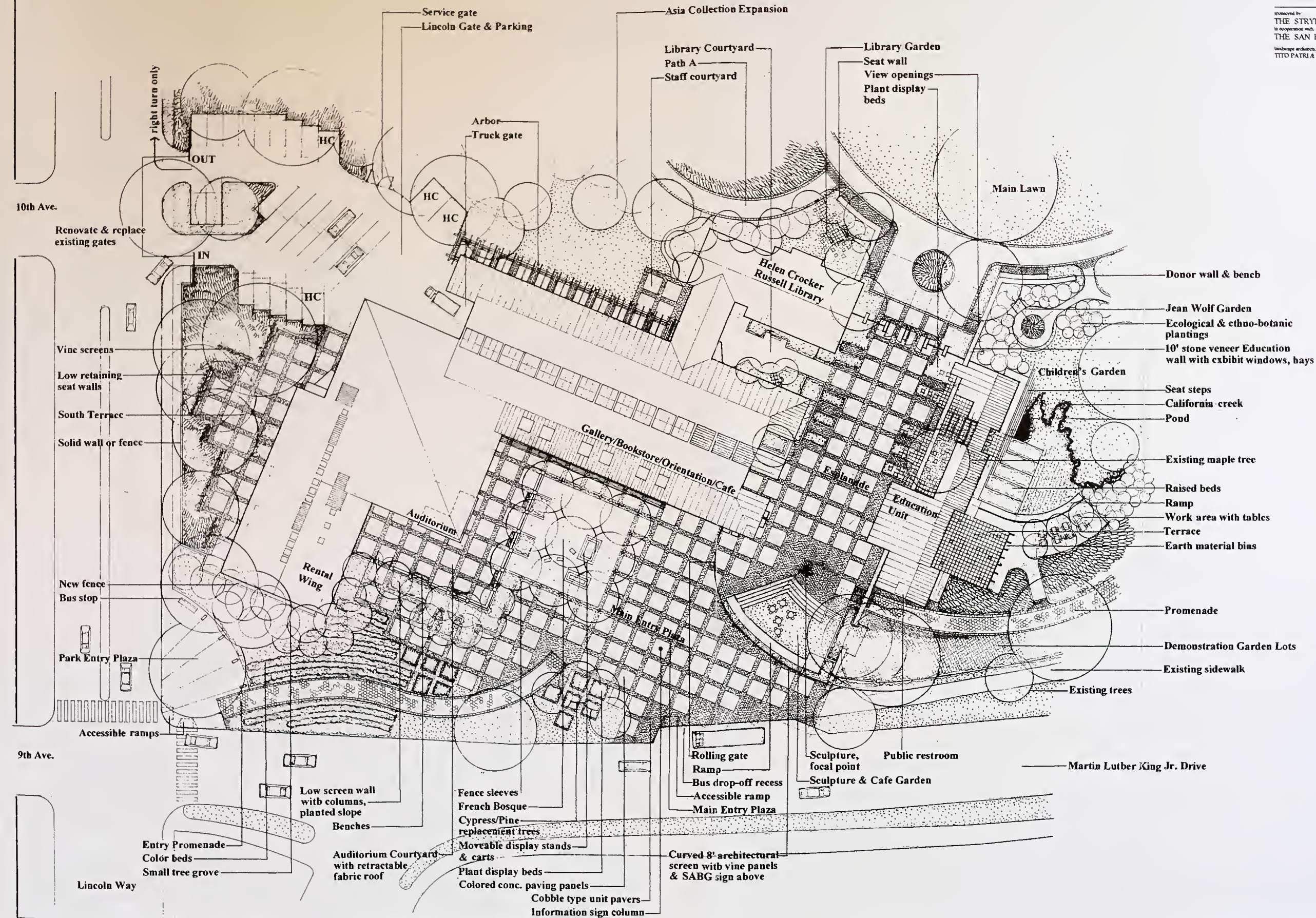
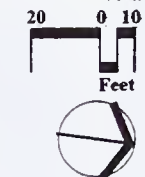
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landscape architects
TITO PATRI & ASSOCIATES

architects
FERNAU & HARTMAN

CFB & MAIN GATE AREA



**Stack Space for the
Helen Crocker Russell
Library of Horticulture**

With over 16,000 superb horticultural volumes, the Library is bursting at the seams. New underground stack space beneath the library courtyard is planned to be accessible to the public.

Enhanced Sources of Revenue for the Gardens & Its Programs

**The County Fair Building/
Rental Space and Staff Offices**

The entire CFB will be rehabilitated, made light and airy with an open skylight in the Gallery and attractive interiors. Indoor and outdoor spaces will be integrated to give the entire building a more garden-like feeling. Large glass sliding doors will welcome people into the Auditorium from an outdoor courtyard. Staff offices will occupy the former Gallery storage areas. The majority of space in the CFB will be devoted to rental space for horticultural and other groups. A percentage of rental revenue will directly support the Strybing Arboretum and Botanical Gardens.

The Bookstore and Cafe

The Society's bookstore will expand fourfold, increasing the variety of its offerings as well as its ability to produce revenue. The store will be beautifully designed and will open into the Orientation Center. The Cafe will sit within the east porch area of the CFB, transforming it by opening its new copper-clad roof up to the Esplanade and street, capturing view and sun. Across the Esplanade is grassy outdoor seating. Coffee and sandwiches will offer a pleasing amenity to visitors and provide income to support Society programs.



**The Thomas Church Pavilion
and Glade**

This graceful, historical landmark provides the focal point for a formal glade area rentable by groups wanting a distinctive garden setting for weddings, memorials and gatherings. Revenue from this source will also support the Strybing Arboretum and Botanical Gardens.



CHAPTER 1



A Garden for the 21st Century

CHAPTER 1

A GARDEN FOR THE 21st CENTURY

Historical Overview

The Origins of SABG



Strybing Arboretum and Botanical Gardens is located in the heart of San Francisco's Golden Gate Park amidst a landscape of lush vegetation and mature trees. What many visitors to the park may not realize is that this landscape is relatively new, a result of human intervention which transformed a huge expanse of sand dunes into what is now a rich, diverse and thriving botanical environment. Because this is a "man-made" environment, its health requires continued human intervention to prevent a return to its former sandy, wind-swept state. Thus, the early founders of the site left a dual legacy of not only a treasured urban park and gardens, but also the constant challenge of high maintenance demands.

The history of Golden Gate Park's site-planning dates back to 1870 when the City of San Francisco commissioned the world-renowned landscape architect Frederick Law Olmsted to design an urban park. Olmsted's plan, thought to be impractical and too costly, was rejected in its early stages. Shortly thereafter, a local surveyor and engineer named William Hammond Hall took over the job of planning and design.

Using an approach well in advance of his time, Hall promoted the use of native plants to create stability in difficult environments. Initial surveys of the site revealed that lupine thrived in areas where wind was at a minimum. Taking his cues from the site itself, Hall began to build wind-sheltering mounds around which he planted lupine mixed with barley for added heartiness. Under his direction, the natives Monterey cypress (*Cupressus macrocarpa*) and Monterey pine (*Pinus radiata*) were systematically planted as stabilizers and windbreaks. In addition to these, Hall integrated the nonnative Tasmanian Blue Gum (*Eucalyptus globulus*), which was fast-growing and tolerant to drought and windy conditions. For each tree, a six-foot pit was excavated and layered with rich compost to encourage deep roots. The trees were then hand-watered from mule-drawn water tanks. This initial planting phase took approximately five years and provided the stabilization necessary for future planting. Today, these now aging trees frame Strybing Arboretum and Botanical Gardens' many vistas and rolling meadows and form a unique landscape with their dramatic and stately presence.

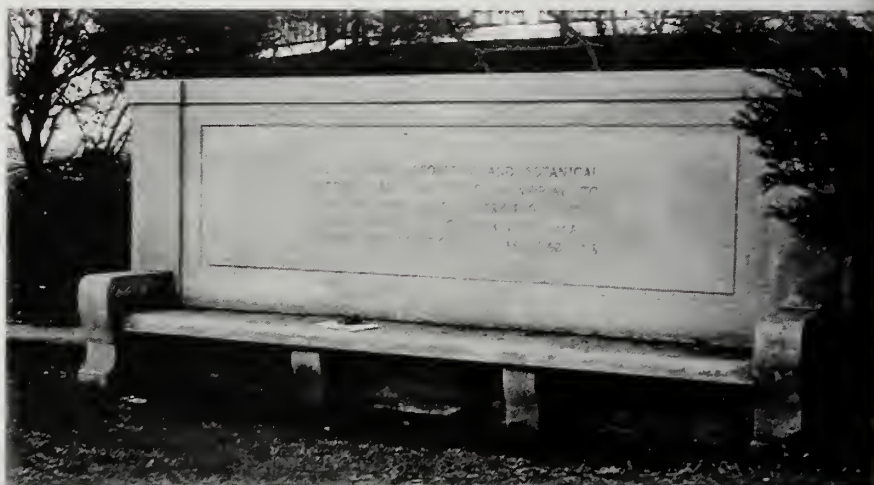
Planting and construction continued over the next several years, during which time John McLaren was appointed as the Park's first Superintendent. In 1890, McLaren proposed that 70-acres be set aside for use as a botanical garden. Like his predecessor, Hall, McLaren envisioned an arboretum for the Park modeled after Harvard's Arnold Arboretum. The project was stalled by the defeat of a bond issue to fund it. Unwilling to abandon his plans completely, McLaren began collecting rare and unusual plants from around the park and planting them on the proposed garden site. In 1915 the collections were augmented when several international participants in the Pan-Pacific Exposition donated the rare and exotic plants displayed in their pavilions. Most notable were the contributions

from New Zealand, which thrived in the San Francisco climate. At least one of these specimens survives today, a New Zealand red pine (*Dacrydium cupressinum*) at the edge of the panel lawn in the heart of the garden.

The Strybing Bequest



It was not until the new century was well under way that the botanical garden in Golden Gate Park emerged from developmental limbo. In 1926 Helene Strybing, a prominent San Franciscan, died, leaving the City a \$200,000 bequest for the "laying out, arrangement, establishment and completion of an Arboretum and Botanical Gardens.....to contain especially a collection of trees, shrubs and plants indigenous to or characteristic of California.....also plants used for medicinal purposes whether natives of California or not shall be given special consideration." The bequest provided funding for construction under the condition that the City would cover maintenance and operations costs. Planting began in the mid-1930s, and in 1937 when the bequest monies finally became available, Eric Walther was appointed as the first director of the newly named Strybing Arboretum and Botanical Gardens. In 1940 the Gardens were officially dedicated and opened to the public, with borders extending from 9th to 19th avenues and from Lincoln Way to South Drive (now MLK, Jr., Drive).



Walther, aided by Depression-time WPA workers and very modest sums of money, laid out the first four acres of the new Gardens. By the time he retired in 1957, 40-acres had been planted. Walther developed both geographic plant collections and those devoted to specific genera, such as magnolias and rhododendrons. These plantings were placed as space allowed rather than according to a landscape plan. It was his idea to plant the deciduous Himalayan *Magnolia campbelli* within the Gardens. It flowered for the first time in the United States in 1940, the year that Strybing Arboretum and Botanical Gardens opened, producing a magnificent 10-inch pink flower.



Founding of the Strybing Arboretum Society

The Strybing Arboretum Society was founded in 1955 by a group of dedicated individuals eager to provide advocacy and support for the young Strybing Arboretum and Botanical Gardens. With the enthusiastic approval of Eric Walther, who was concerned about the future of the young garden after his retirement, the Society was established as a nonprofit corporation governed by a Board of Trustees. Paul Hutchison was elected President and presided over fourteen Directors and an equal number of Advisory Board members. Membership was open to the public for a small fee. In a letter to the *California Horticultural Journal*, the Society stated its mission: "To make Strybing Arboretum and Botanical Gardens better known, to assist in the preservation and further development of Strybing Arboretum and Botanical Gardens in cooperation with the Department of Recreation and Parks... through guided tours, meetings and publications."

The Tetlow Master Plan and Related Projects

In 1958, Richard Baker, the head of the University of California, Berkeley, Botanical Garden, was hired as a consultant to advise on a future course for Strybing Arboretum and Botanical Gardens. He urged the development of a master landscape plan to enable the Gardens to realize its botanical and educational potential. At the Society's urging, the San Francisco Recreation and Park Commission agreed to the planning effort and in 1959 retained Robert Tetlow, a distinguished Berkeley landscape architect. The grace and strength of Tetlow's interlocking meadows and vistas culminated in the east/west axis from the Main Gate to what is now the Zellerbach Garden and provided the perfect organizing framework for Strybing's lush but haphazard collections.

The early 1960s saw the introduction of the popular Home Demonstration Gardens. In a collaborative effort, *Sunset Magazine* provided fees for landscape designers while the State paid for construction and maintenance costs. Designed

by Edward Williams of Eckbo, Royston and Williams, the gardens demonstrated garden design ideas as well as plants and planting methods for the San Francisco home gardener.

In connection with the Tetlow plan, construction of the County Fair Building began in 1959 and was completed in 1961. Located at the intersection of Ninth Avenue and Lincoln Way, the building was originally named the Hall of Flowers and was designed by Appleton and Wolfard Architects of San Francisco. Its purpose was to provide a venue for the San Francisco County Fair (traditionally the S.F. Flower Show) as well as rental space for horticultural groups from the Bay Area. The building was financed by a capital improvement fund made up of State Fair moneys.

**The Strybing Nursery &
Helen Crocker Russell
Library of Horticulture**

In 1961 the Strybing Arboretum Society, which had until this point confined its efforts to educational programs and advocacy, raised capital funds from private donors to construct a plant nursery devoted exclusively to the needs of Strybing Arboretum and Botanical Gardens. The Society felt strongly that the Gardens, as a highly specialized facility growing rare and unusual plants, could not rely for its propagation needs and plant-culture record keeping on the centralized Park nursery serving Golden Gate Park as a whole. The completed complex of greenhouse, lathhouse, yard, headhouse and potting shed was deeded to the City as a "gift in place." Unfortunately, the area assigned to the Nursery proved to be the coldest spot not only in the Park but in all of San Francisco. From the start, the Nursery served a dual function: the garden staff used it to propagate and raise plants for the collections, and Society volunteers used it to propagate unusual plants from the collections to sell to the public. Revenue thus earned went to support the Gardens and education programs offered by the Society.



The Society's next bricks-and-mortar venture was the construction of the Helen Crocker Russell Library of Horticulture. Constructed in 1972 with private gifts and given as a "gift in place" to the City, the building featured a beautiful public reading room opening on a vista of Tetlow's main meadow and included stack space, a Board room and Library offices. The intent of the Library was to provide a horticultural reference facility for the gardeners of the Bay Area, complementing and reinforcing the knowledge to be gained from the collections themselves. From the beginning, the Library was provided as a free educational service to the public, open every day of the week. The Society, which retained

ownership of the book collections, provided professional library staff and committed itself to building a first-rate book collection.

The Public/Private Partnership in the 1960's and 1970's

Helene Strybing specified in her bequest that the Arboretum and Botanical Gardens was to be a place of "information and instruction" for the public. Upon acceptance of her bequest, the provision of this information and instruction became the responsibility of the San Francisco Recreation and Park Commission. As funding for the Gardens was limited from the outset, responsibilities were divided between the City and the Society. While the City garden staff maintained and slowly developed the plant collections, the Society began to provide both educational and interpretive programs for the Gardens as well as modest funds for assisting in collections development. Under the leadership of Garden Directors Brydon, Hudson and Bryan and guided by the Tetlow master plan, the Asian collections, Mediterranean climate collections and special collections of magnolias, rhododendrons, succulents and conifers were augmented. The Society published guide lists to plants in the collections, offered Garden tours to the public and built and staffed the information Kiosk, the only public information facility within Golden Gate Park.

Plants Suited to the Central Coastal Region of California

In the 1980's under the leadership of Garden Director Walden Valen, plant collections policy was tightened and clarified to focus on plants naturally suited to the precise growing conditions offered in San Francisco. Mediterranean climate collections were displayed in newly designed and landscaped gardens funded by the Society. Notable among these are the Cape Province Garden, the Menzies Garden of California Native Plants, the East Australian Garden and the large New Zealand collection. The New World Cloud Forest, displaying unique and endangered species from the foggy Mexican and Guatemalan highlands, found a hospitable home in San Francisco's microclimate. The 1990's have seen the addition of the Chilean Garden, the dry Mexican plant collection, the Primitive Plant Garden and the Malesian rhododendron collection.



The Public/Private Partnership Today

Today Strybing Arboretum and Botanical Gardens has 75-acres under cultivation and is open free to the public every day of the week. Over half a million visitors stroll through its grounds every year, admiring over 7,000 kinds of plants from six of the world's continents. The Gardens are operated by a partnership of the City of San Francisco through its Recreation and Park Department and the nonprofit Strybing Arboretum Society, a membership organization of 3,000 governed by a Board of Trustees. With funding and staffing both chronically short, the City provides the Garden Director, a nurseryman, a foreman and eight gardeners. They are responsible for all garden maintenance. The Society's staff of thirteen has the following responsibilities: collections management, public education programs (adults and children), Garden publications, horticultural library, nursery and bookstore businesses, volunteer programs, fundraising and membership, advocacy and public relations. The staff's efforts are augmented by the work of over 350 volunteers.



The Master Plan Process

In the thirty-five years that have passed since completion of the Tetlow master plan, the role of botanical gardens in the community has changed and the continued economic viability of cultural and scientific institutions has been severely challenged. The decision to create a new master plan for Strybing Arboretum and Botanical Gardens stemmed from the necessity to reevaluate the Gardens' institutional purpose, its ability to provide relevant and accessible public programs and the state of its current collections in light of changed conditions and new demands. All of the many people involved in producing this plan share the conviction that botanical gardens have a crucial role to play in the world today and the world of the future. They further agree that it is important to pass on the cultural and scientific heritage of this living museum of plants to those who follow us.

Phase One: Laying the Groundwork November 1992 - December 1993

During late 1992 and early 1993 City and Society staff and the Society's Board of Trustees engaged in a "vision planning" process to define the requirements of future excellence at Strybing Arboretum and Botanical Gardens. Discussions were held with the S.F. Recreation & Park Department staff to ascertain whether the City would welcome the Society's commissioning a master plan for the Gardens to be funded by the Society. The answer was affirmative, as the Department was concurrently producing a new master plan for Golden Gate Park as well as seeking a bond issue to repair infrastructure within the Park. With this assurance the Society formed an ad hoc Master Planning Committee (composed of staff, Trustees, volunteers and outside professional advisors) and by the fall of 1993 had put together a Request for Proposal, interviewed and selected as the planning team Tito Patri & Associates, landscape architects, and Fernau & Hartman, architects.

In October 1993, the S.F. Recreation & Park Commission granted formal "Approval for the Strybing Arboretum Society to develop a Master Plan for Strybing Arboretum & Botanical Gardens and the renovation of the County Fair Building in Golden Gate Park, at no cost to the City." In December 1993, the Society's Board of Trustees approved funding of the master-planning contract and appointed a Master Plan Steering Committee (MPSC) consisting of staff, Trustees, Park Department officials, volunteers/community members and outside professional advisors.

Phase Two: Inventory and Analysis, Design Recommendations January 1994 - March 1995

Because Strybing Arboretum and Botanical Gardens is a public institution, the Recreation and Park Commission required public participation in the planning process. Between January 1994 and March 1995, the MPSC met monthly with the planning team. At the outset of the process, a questionnaire about public use of the Gardens and the County Fair Building was sent out to 1,000 members of the public. Responses were tallied and used to aid the planning process. During the fifteen months of working meetings, three public meetings were held to report on planning progress, hear suggestions and answer questions. The meetings were advertised in advance in the local media. The planners began with a survey of existing conditions at SABG (see Chapter 5), followed by an assessment of the Gardens' needs for the future. Alternative design solutions followed, which were ultimately refined into the final plan. At each step of the way there was ongoing dialog with the MPSC, the Society's Board of Trustees, the public, and the Recreation and Park Department staff. Regular progress reports were presented to the Parks and Planning Committee of the S.F. Recreation and Park Commission.

**Phase Three:
A Garden for the 21st Century
Draft Master Plan - 1995**

In April of 1995 the S.F. Recreation and Park Commission approved the inclusion of the Draft Master Plan for SABG in the Draft Master Plan for Golden Gate Park. This entire plan has been forwarded to the S.F. Planning Department for Environmental Impact Review (EIR). It is due back from review in the spring of 1996. At that time another series of public meetings will be held to determine the final form of the plan.

The plan presented in this document and accompanying drawings embodies a clear core vision for the future of Strybing Arboretum and Botanical Gardens that has been tempered by the compromises necessitated by public will and financial realities. The collaborative process by which it came into being has produced a plan which preserves the unique, historical landscape of the Gardens while providing design changes to enhance its beauty and viability in the future.

The plan has been designed as a series of flexible guidelines for gradual development in phases over the next five to ten years. Its scope ranges from innovative plans for new facilities and landscaped collections areas to Garden-wide design guidelines for interpretive signage, paths and visitor amenities. It will be supplemented by "The Strategic Plan for Strybing Arboretum and Botanical Gardens," which addresses issues of governance, fundraising and other sources of revenue, garden maintenance and public programs.



Planning Issues and Concerns

A Garden for the 21st Century master plan is driven not only by a vision for the future of Strybing Arboretum and Botanical Gardens, but by the need to correct significant difficulties in current operation and design. The following are issues which present impediments to excellence and which the Master Plan is designed to address.

Botanical Garden Identity

For Strybing Arboretum and Botanical Gardens there are distinct disadvantages to being located in the middle of one of the nation's most beautiful and famous urban parks. In the most basic terms, the Gardens get lost in the welter of other attractions provided in Golden Gate Park, all of them scenic and several of them horticultural. Both tourists and local visitors regularly confuse SABG with the Victorian Conservatory of Flowers. People cannot understand how, or if, the Park's Rose Garden and Rhododendron Dell are related to Strybing. Many residents of San Francisco are totally unaware that their city boasts one of the great botanical gardens in the country.

Abetting this confusion is the fact that Strybing's collections are spread out over 75-acres with no concentration of dramatic annual plantings, architecture or orientation area to alert the visitor to the fact that they have just entered a botanical gardens. The Main Gate is particularly unimpressive. Many visitors walk through the Gardens without ever realizing that they have entered an area that is different from the rest of the expanse of Golden Gate Park. Once in the gate they must traverse a huge meadow before entering an area that is obviously planted as a botanical garden.

The County Fair Building sitting immediately to the south of the Main Gate is a rather forbidding structure, very un-garden-like in nature and lacking a clearly defined entrance. It provides the visitor with no information about what kind of place a botanical garden is and what can be experienced and enjoyed within.

Public Access through Education & Interpretation

A botanical garden is an educational and scientific institution as well as a repository of human culture. One of the major roles of a public botanical garden is to foster understanding of the nature of plants and their essential role in all ecological systems on our planet. A well-interpreted garden is also a source of information about horticulture, botany and landscape design. When the City of San Francisco accepted Helene Strybing's bequest to create an arboretum and botanical gardens, implicit in that acceptance was the responsibility to undertake the educational activities that form an integral part of this kind of institution.

Efforts to impart educational and interpretive information to the public at Strybing Arboretum and Botanical Gardens have been hampered by the lack of appropriate facilities for providing orientation information to visitors entering the Gardens, as well as classroom, lecture and workshop space dedicated to the purpose of garden-education programs. Programs at Strybing requiring an indoor site must compete for rooms in the County Fair Building, a public rental facility often occupied by events having nothing to do with the Gardens or horticulture.

The Gardens also lack an explanatory plant exhibition whose intent is to inform the public of the purpose of a botanical garden and which can be experienced in a relatively short period of time.

Staffing & Maintenance

SABG lacks adequate room to house even its small current staff. The gardeners have no indoor space in which to do their record-keeping. They eat lunch in their cars in the parking lot. The Society's staff are doubled up in offices the size of broom closets and have no meeting rooms. There is no room available for the Gardens' 350 volunteers to leave their coats and bags. The Nursery Managers have no offices. Nor is there room to store garden vehicles, equipment and supplies.

The current staff is too small to provide the level of excellence in maintenance and public service that it strives for.

Funding

Since 1988, City support for the Gardens has steadily declined due to budgetary constraints in a weak economy. As this situation reflects a national trend, it is unreasonable to expect an increase of municipal support in the future. For forty years, the Society has successfully sought private funds to keep SABG growing. To insure future maintenance and growth it must:

- 1) identify new opportunities for increasing earned income for SABG;
- 2) clarify those areas of SABG operation which will require new or enhanced sources of funding.



Master Plan Goals and Objectives

Goal 1: **Create a distinctive visual identity for the Gardens to distinguish them from Golden Gate Park as a whole.**

- Objectives**
- a. *Design an Orientation/Exhibition Center for SABG to inform the public about what a botanical garden is, how they can use it and about SABG's collections and role in particular.*
 - b. *Transform the Gardens' entrances to make them inviting to the public and reflective of the mission of SABG.*
 - c. *Create a new Western Entrance to the Gardens.*
 - d. *Provide an inviting, efficient and attractive pedestrian-circulation plan to encourage visitors to experience the whole expanse of the collections as well as a unifying sense of place.*

Goal 2: **Provide for the expansion of plant collections and their display.**

- Objectives**
- a. *Redesign and relocate the SABG Nursery to allow for a greater volume of plant propagation and production as well as future plant-introductions program.*
 - b. *Create a series of California-plant-habitat gardens for the western end of SABG.*
 - c. *Create vistas, windbreaks, etc., to enhance display of collections. Suggest areas for siting new or enlarged Mediterranean and temperate climate collections.*



Goal 3:

Improve access to the Gardens by making the exhibits and educational services more evident and appealing to a broad public.

Objectives

- a. *Create a SABG Education Center to be used exclusively for public education programs in horticulture, botany, ecology, etc., for adults and children.*
- b. *Create a Children's Garden for the hands-on learning of gardening skills as well as ecology. Place this garden in a highly visible area.*
- c. *Create a plant-conservation exhibit to be used as an introduction to SABG.*
- d. *Reconceptualize, redesign and relocate the Demonstration Gardens.*
- e. *Provide for new stack space for the Helen Crocker Russell Library of Horticulture.*

Goal 4:

Increase sources of financial support for the Gardens and their programs.

Objectives

- a. *Redesign the County Fair Building to provide improved, attractive rental space to provide a revenue stream for SABG and S.F. Recreation & Park Department.*
- b. *Provide for an enlarged bookstore and a new cafe to increase earned income revenues for SABG exclusively.*
- c. *Provide an outdoor garden area for wedding and event rentals, creating revenue stream for SABG and S.F. Rec. & Park. Dept.*
- d. *Design all entrance gates and Orientation/Exhibition Center to allow for an admission charge to SABG in the future.*
- e. *Provide staff offices and amenities appropriate to the task of managing SABG at a high level of excellence. Provide a meeting room for volunteers.*



CHAPTER 2

MAJOR ARCHITECTURAL DESIGN PROPOSALS



The major design proposals that constitute this chapter and the next form the core of the Master Plan. It is the intent throughout to design a totally integrated landscape in which the structures within the Gardens speak as much as possible about their botanical setting. The design principles below inform all of the following architectural design recommendations:

- Principle 1:** *Building For the Community: The CFB renovation should to the greatest degree possible improve the function and beauty of the building for the SAS, rental users and all community members who use the building and the Gardens.*
- Principle 2:** *Building in a Garden/Blurring the Edges - Edges between building and garden should be "blurred" by inviting Garden activities into the CFB complex and bringing CFB programs out to the gardens and the public, where appropriate. The use of lightweight, easily maneuvered temporary structures should be explored for functions such as exhibitions and plant sales.*
- Principle 3:** *Paired Indoor and Outdoor Rooms - In the spirit of building in a garden, each major indoor space should relate to and enrich adjacent outdoor space through its activities and uses.*
- Principle 4:** *Site Repair - Changes in internal program and space-use generated in the master-planning process should help to improve the overall quality of the CFB and its surroundings. Advantage should be taken of opportunities to use building program to bring life to areas of the site which are currently under-utilized and uninviting.*
- Principle 5:** *Clarify Program and Circulation - Both new and existing program should be arranged to make (interior) CFB activities more visible and inviting to the public. As a public building, the CFB should, through the renovation process, become more easily accessible and inviting to all users, encouraging their participation in the public program elements within it and the movement of both public and staff through it.*
- Principle 6:** *Demonstrate Ecological and Horticultural Principles - To the greatest extent possible, all renovations (buildings and gardens) should be configured and constructed so as to take full advantage of opportunities for environmentally and horticulturally responsive building principles, while demonstrating these principles to building users wherever possible. Existing design features which provide for horticultural needs should also be addressed.*



*Major
Architectural
Design
Proposals*

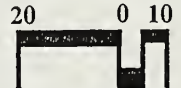


MASTER PLAN

STRYBING ARBORETUM & BOTANICAL GARDENS
san francisco, california

sponsored by:
THE STRYBING ARBORETUM SOCIETY
in cooperation with:
THE SAN FRANCISCO RECREATION & PARK COMMISSION
landscape architects:
TITO PATRÍ & ASSOCIATES
architects:
FERNÁU & HARTMAN

PLAN OF COUNTY FAIR BUILDING AND EDUCATION UNIT



Feet



ROOM KEY

- | | |
|--------------------------------|----------------------|
| 1. New Rental Room | 7. Entry and Hallway |
| 2. Old Library | 8. Existing |
| 3. Existing Kitchen | 9. Existing |
| 4. Rec Room | 10. Auditorium |
| 5. Existing WC's (ADA upgrade) | 11. Auditorium |
| 6. Existing Janitor Closet | 12. Prep Room |
| 7. Entry and Hallway | 13. Gallery |

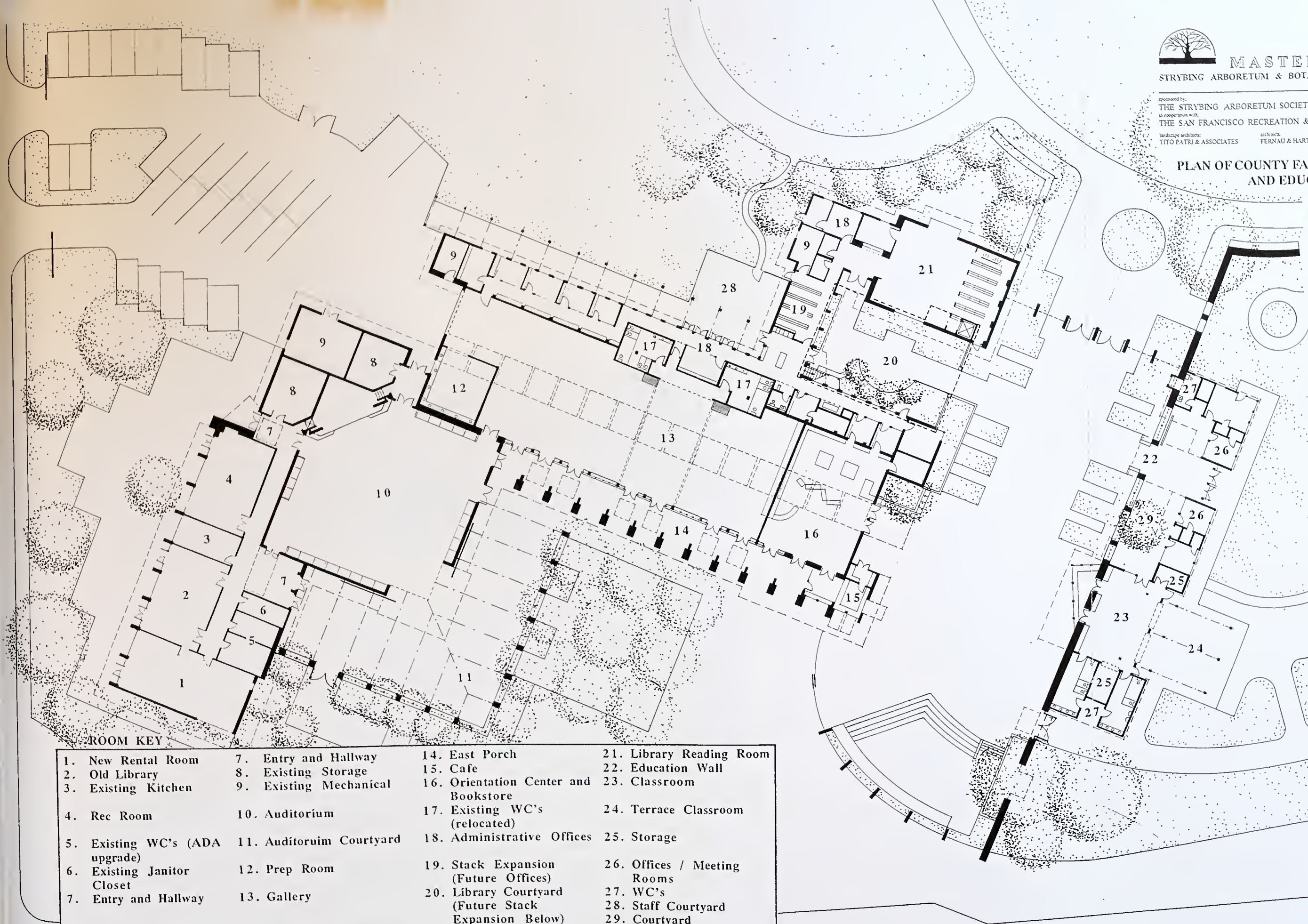
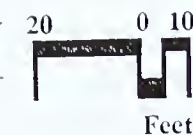


MASTER PLAN

STRYBING ARBORETUM & BOTANICAL GARDENS
SAN FRANCISCO, CALIFORNIA

SPONSORED BY:
THE STRYBING ARBORETUM SOCIETY
IN COOPERATION WITH
THE SAN FRANCISCO RECREATION & PARK COMMISSION
LANDSCAPE ARCHITECTS:
TITO PATRI & ASSOCIATES
ARCHITECTS:
FERNAU & HARTMAN

PLAN OF COUNTY FAIR BUILDING AND EDUCATION UNIT



ROOM KEY

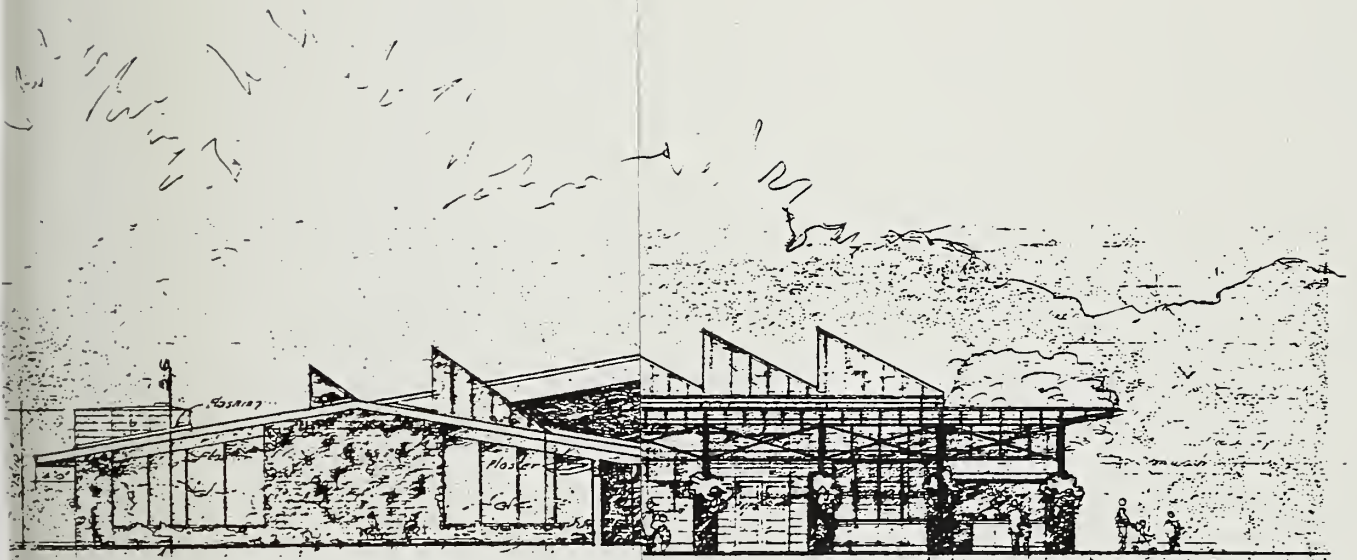
- | | | | |
|--------------------------------|--------------------------|--|-----------------------------|
| 1. New Rental Room | 7. Entry and Hallway | 14. East Porch | 21. Library Reading Room |
| 2. Old Library | 8. Existing Storage | 15. Cafe | 22. Education Wall |
| 3. Existing Kitchen | 9. Existing Mechanical | 16. Orientation Center and Bookstore | 23. Classroom |
| 4. Rec Room | 10. Auditorium | 17. Existing WC's (relocated) | 24. Terrace Classroom |
| 5. Existing WC's (ADA upgrade) | 11. Auditorium Courtyard | 18. Administrative Offices | 25. Storage |
| 6. Existing Janitor Closet | 12. Prep Room | 19. Stack Expansion (Future Offices) | 26. Offices / Meeting Rooms |
| 7. Entry and Hallway | 13. Gallery | 20. Library Courtyard (Future Stack Expansion Below) | 27. WC's |
| | | | 28. Staff Courtyard |
| | | | 29. Courtyard |



MASTER PLAN
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san francisco, california

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TITO PATRI & ASSOCIATES
architects:
FERNAU & HARTMAN

COUNTY FAIR BUILDING
EAST ELEVATION

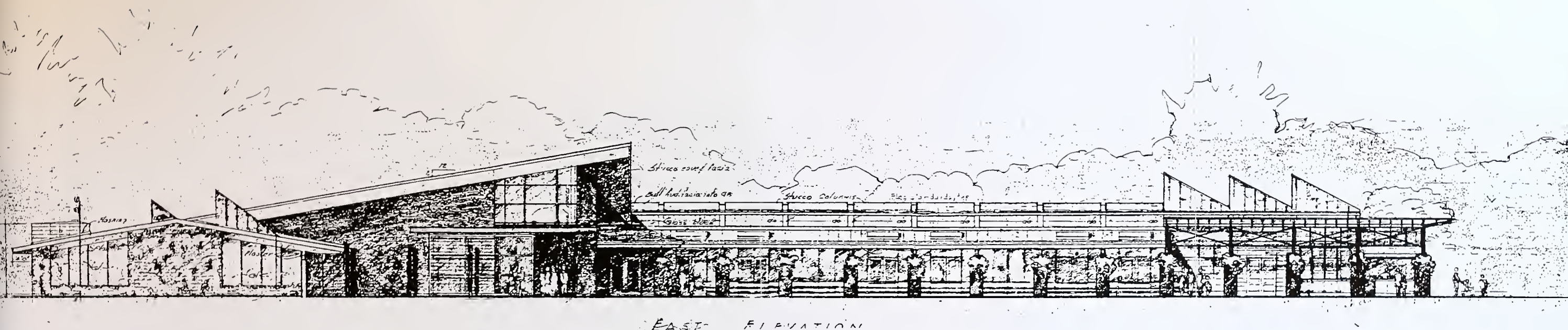




MASTER PLAN
STRYBING ARBORETUM & BOTANICAL GARDENS
SAN FRANCISCO, CALIFORNIA

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landscape architect
TITO PATRI & ASSOCIATES
architects
FIRNAU & HARTMAN

COUNTY FAIR BUILDING
EAST ELEVATION





MASTER PLAN

STRYBING ARBORETUM & BOTANICAL GARDENS

san francisco, california

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landscape architects:
TITO PATRI & ASSOCIATES
architects:
FERNAU & HARTMAN

COUNTY FAIR BUILDING NORTH ELEVATION





MASTER PLAN
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landscape architects
TITO PATRI & ASSOCIATES

architects
FERNAU & HARTMAN

COUNTY FAIR BUILDING
NORTH ELEVATION



**Physical
Description:**

As the primary focus for all visitors to the Gardens and many to Golden Gate Park, the Orientation Center and Bookstore will comprise a light-filled, open space, capable of supporting changeable and even growing exhibits, with monumental garden doors and a copper awning facing the Esplanade and Education Wing. This improved quality of natural light, introduced through the addition of three south-facing, copper-clad dormer windows. A direct connection to the Cafe will allow cafe seating in all forms of weather. Here more than any other space in the Gardens, is an opportunity for the pedagogical use of wood products. When not made from native species veneered panels, or from site-harvested trees, all cabinetry and finish carpentry in the Orientation Center and Bookstore should be made from various engineered wood products (such as formaldehyde-free particle board and oriented strand board) that are made from recycled wood, wood by-products, or harvested from responsibly managed forests. This cabinetry will include fixed as well as moveable bookshelf and display carts that connect to close off the Bookstore when not in use (allowing independence of scheduling), exhibition tables, carts, and booths, wall-mounted display systems, and a general information desk.

**Cafe -- Area #15
(360 s.f.)**

Intent:

To provide a place, within the existing County Fair Building, for rest and refreshment for Gardens and Park visitors that will work with the Orientation Center and Bookstore to enliven the public spaces of the Esplanade, and which:

- Will have a strong and attractive presence within the landscape of the Gardens.
- Through the introduction of new materials and finishes, will have a warmer character than the existing building.
- Will use finish materials, especially wood, in a way that demonstrates ecological and horticultural principles.
- Will have a direct relationship to its adjacent outdoor space and, by extension, a place in the Gardens.

**Physical
Description:**

The cafe sits within the northeast corner of the CFB's existing East Porch, transforming it by opening its new copper-clad roof up to the Esplanade and street, capturing views and sun. Also open to the Orientation Center, the Cafe has the flexibility to expand either inside or outside, like the adjacent Orientation Center. Like the adjacent Orientation Center, native species veneered panels or wood from site-harvested trees should be used. All cabinetry and finish carpentry in the Cafe could also be made from various engineered wood products (such as formaldehyde-free particle board and oriented strand board) that are made from recycled wood, wood by-products, or harvested from responsibly managed forests. This cabinetry will include a small food prep and storage area, a serving counter with security awnings, a small indoor seating area with adjacent outdoor seating, and storage for tables and chairs.

Poised between the Esplanade and Orientation Center, the Cafe has the potential to add activity and social energy to both; it should provide a meeting place and a place to rest and enjoy a book just purchased at the Bookstore, while watching the crowd and enjoying views of the Gardens. Consequently the Cafe's outdoor seating component should be centrally located, have access to sun, and protection from wind.

Helen Crocker Russell Library and Future Library Stack Expansion -- Areas #20 & #21

(3264 s.f.) (2100 s.f.)

Intent: To upgrade existing Library spaces and offices and provide for future stack expansion and rare-book storage which:

- Will improve circulation and work areas, providing appropriate levels of connection and privacy for staff.
- Through the refinishing of existing material finishes, will have a warmer character than the existing building.
- Will use finish materials, especially wood, in a way that demonstrates ecological and horticultural principles.
- Through new lighting, pinup, display, and storage elements, will be more functional.

**Physical
Description:**

The basic arrangement of the Library will remain much as it is presently, with subtle, but important, changes to material finishes and lighting design. The Head and Assistant Librarians will be given more-private offices, and some short-term stack expansion will be provided in the room along the Library Courtyard's south side. The major stack expansion will be in a new basement to be constructed below the existing Library Courtyard, allowing the Library to continue to improve the quality and quantity of its collections well into the next century. The basement will preserve the Courtyard and its plantings, while allowing the CFI building mass to remain unchanged. Once this basement is completed, it is suggested that the smaller stack-expansion area be converted back to offices.

As the main goal of the Library staff is to establish additional storage and rare book areas without impinging on the Library Reading Room, the renovation of the Library's existing spaces can be limited to minor space planning, materials and finishes, bathroom and lighting upgrades.

Education Center -- Areas #23 & #24

(2422 s.f.)

Intent: To create an education facility that:

- Will have a distinct civic presence on the Arboretum Esplanade and be an integral part of the Gardens.
- While forming a strong edge to the Esplanade, will allow visual access to education activities and the Gardens beyond.
- Will have a direct relationship to its adjacent outdoor space and, by extension, a place in the Gardens.
- Will use finish materials, especially wood, in a way that demonstrates ecological and horticultural principles.

**Physical
Description:**

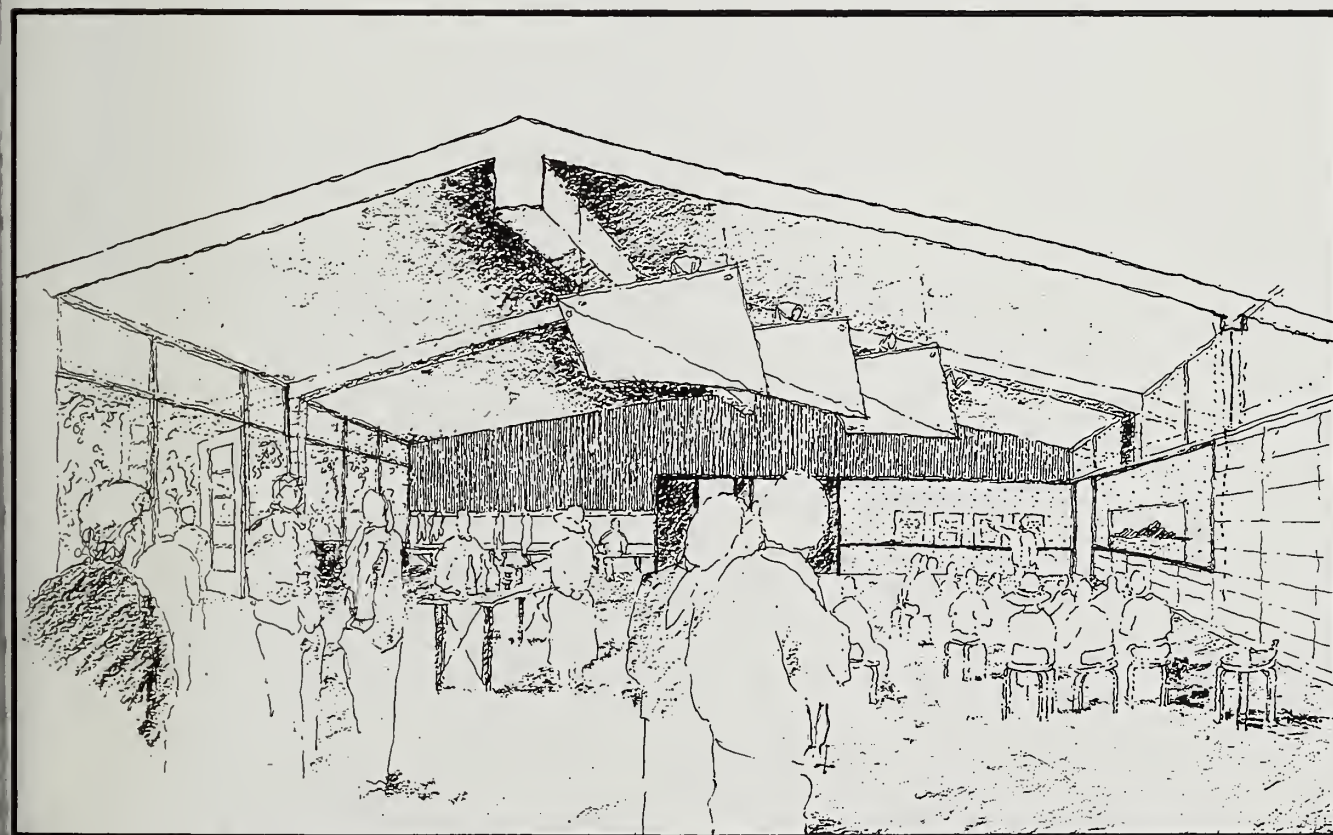
A monumental trellis entry leads to the securable Education Center Courtyard as well as to the Children's Garden beyond. Shaded by an existing Japanese Maple tree and a covered walkway along three sides, this courtyard links entrances to the Main Classroom, Education Offices, and Volunteer support spaces. The Classroom itself is a large open space that straddles the stone Education Wall. This wall divides the space into a south-facing "greenhouse" and the classroom proper. The north side of the classroom opens onto the Terrace Classroom through large glazed roll-up doors. Set into the Children's Garden, the Terrace

New Rental Room -- Area # 1
(1275 s.f.)

Intent:

To create a multipurpose rental space within the existing County Fair Building which:

- Will be larger than the Rec. Room and Old Library, but more finished and intimate in scale than the spaces available in the Gallery and Auditorium.
- Through the application of new materials and finishes, will have a warmer character than the existing building, as well as its own unique identity among the other rooms.
- Will use finish materials, especially wood, in a way that demonstrates ecological and horticultural principles.
- Through new acoustical, lighting, and pinup/presentation elements, will be more functional.
- Will have a direct relationship to its adjacent outdoor space and, by extension, a place in the Gardens.

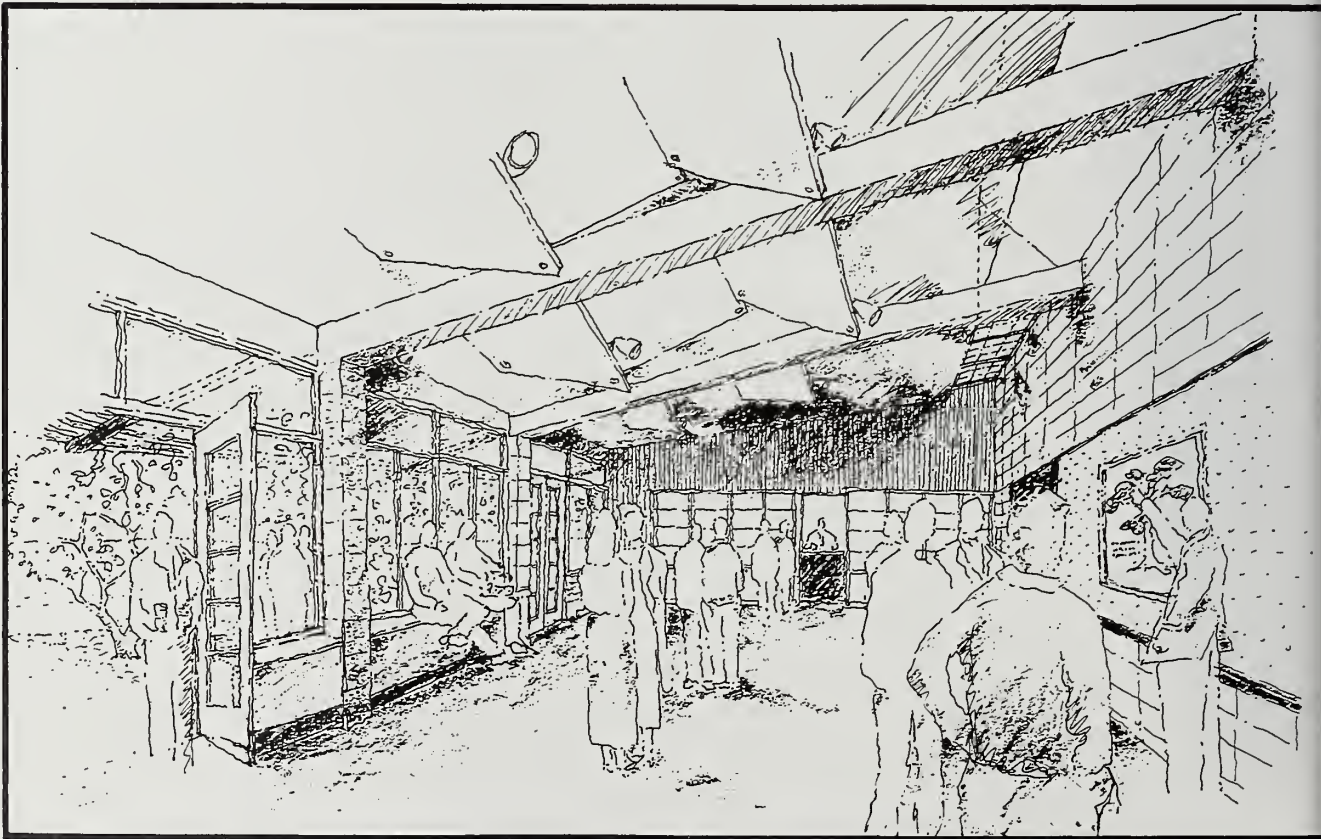


**Physical
Description:**

New elements such as the hanging ceiling panels will improve acoustics, provide indirect lighting, and provide direct task lighting to pin-up walls for presentations. These panels will be finished in a wood veneer of native tree species unique to the overall renovation, thus giving the space an intimacy and scale as well as a unique identity within the CFB complex. Other new functional elements, such as the built-in benches and coat hooks, could be made from site-harvested trees. Windows will be darkenable and slide projection screens will be provided for presentations. Partition walls will be finished as acoustic elements and new pinup space for presentations. The existing concrete block walls will be stained and sealed to maintain a connection with the CFB's existing architectural character, while increasing its warmth. Finally, new glass doors to the South Terrace will be added to improve the connection to the Gardens.

This space, formerly used for administrative offices, will provide additional rental space to compensate for the insertion of the new Orientation Center and Bookstore into the existing CFB. Mid-sized between existing rental rooms and the larger CFB spaces, it will provide a useful alternative for garden club meetings, receptions, classes, or workshops.

**Old Library Room -- Area #2
(864 s.f.)**



Intent:

To renew and enhance this existing multipurpose rental space within the County Fair Building in a way which:

- Through the careful reuse of existing cabinetry, and the application of new materials and finishes, will have a warmer character than the existing space, as well as its own unique identity among the other rooms.
- Will use finish materials, especially wood, in a way that demonstrates ecological and horticultural principles.
- Through new acoustical, lighting, and pinup/presentation elements, will be more functional.
- Will have a direct relationship to its adjacent outdoor space and, by extension, a place in the Gardens.

**Physical
Description:**

Existing wood display cabinets will be carefully repositioned and refinished. A new south-facing dormer window will be added to provide a wash of daylight along the principal pinup wall. New elements such as the hanging ceiling panels will improve acoustics, provide indirect lighting, and provide direct task lighting to pinup walls for presentations. These panels will be finished in a wood veneer of native tree species unique to the overall renovation, thus giving the space an intimacy of scale as well as a unique identity within the CFB complex. Other new functional elements such as the built-in coat hooks will be made from site-harvested trees. Windows will be darkenable and a slide projection screen will be provided for presentations. Partition walls will be finished as acoustical elements and new pinup space for presentations. The existing concrete block walls will be stained and sealed to maintain a connection with the CFB's existing architectural character, while increasing its warmth. Finally, new glass doors to the South Terrace will be added to improve the connection to Gardens.

The existing wood display cabinets should be retained; these cabinets provide semipermanent display space for many of the garden groups that regularly use the space, giving the Old Library a sense of the SAS's and the larger horticultural community's history in this place. This room has been the most often used rental space in the CFB complex, and its best qualities should be extended through the renovation.

**Recreation Room -- Area #4
(864 s.f.)****Intent:**

To renew and enhance the existing multipurpose rental space within the County Fair Building in a way which:

- Through the application of new material finishes, will have a warmer character than the existing space, as well as its own unique identity among the other rooms.
- Will use finish materials, especially wood, in a way that demonstrates ecological and horticultural principles.
- Through new acoustical, lighting, and pinup/presentation elements, will be more functional.
- Will have a direct relationship to its adjacent outdoor space and, by extension, a place in the Gardens.

**Physical
Description:**

A new south-facing dormer window will be added to provide a wash of daylight along the principal pinup wall. New elements such as the hanging ceiling panels will improve acoustics, provide indirect lighting, and provide direct task lighting to pinup walls for presentations. These panels will be finished in a wood veneer of native tree species unique to the overall renovation, imparting intimacy of scale and unique identity. New functional elements such as the built-in coat hook could be made from site-harvested Cypress trees. Windows will be darkened and a slide projection screen will be provided for presentations. Partition walls will be finished as acoustical elements and new pinup space for presentations. An integrally colored, polished plaster treatment will be given to the fireplace area hearth and the north wall toward the new hallway. Existing concrete block walls will be stained and sealed to maintain the CFB's existing character, while increasing its warmth. Finally, new glass doors to the South Terrace will be added to improve the connection to the Gardens.

This room has been one of the most often used rental spaces in the CFB complex and, although it will be made a bit smaller, its best qualities should be extended through the renovation. The existence of a fireplace gives it an especially intimate quality among CFB rental spaces.

**Rental Wing Entry -- Area #7
(1146 s.f.)**

Intent:

To create a distinctive, identifiable entry to the existing County Fair Building which:

- Will have a strong and attractive presence within the landscape of the Gardens, as well as within the rental wing's own interior circulation spaces.
- Through the application of new materials and finishes, will have warmer character than the existing entries.
- Will use finish materials, especially wood, in a way that demonstrates ecological and horticultural principles.
- Through new lighting and pinup/presentation elements, will be more functional.

**Physical
Description:**

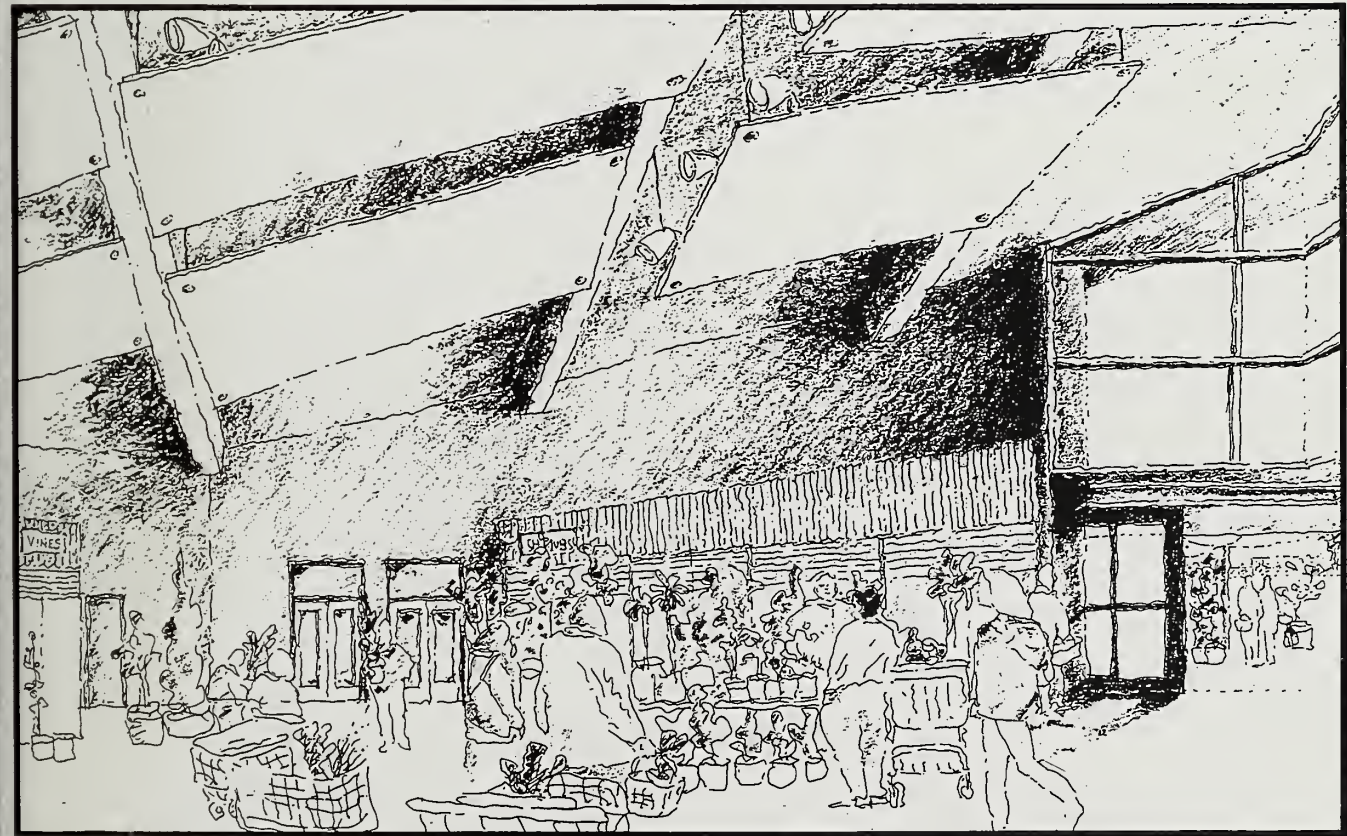
A new copper-clad south-facing dormer window will be added at the Main Entry Plaza and Parking Lot doors to provide a wash of daylight, and to mark the entries from a distance; the Parking Lot Entry will receive a copper-clad awning as well. New functional elements such as the built-in benches could be made from site-harvested trees. New pinup space will be added to the Front Entry for notices and to the Hallway for displays. An integrally colored, stucco plaster treatment will be given to the perimeter walls of the Auditorium to mark it as a distinct volume forming one edge of the Entry. Existing block walls will be stained and sealed to increase warmth of character.

It is especially important that the Entry and circulation spaces not only reach clearly from Martin Luther King, Jr., Drive and the Plaza approaches to the Rental Wing, but that they immediately communicate, through their feeling and materials, the ecological and horticultural values of the Gardens and the large horticultural community.

Auditorium & Courtyard -- Areas #10 & #11
(5184 s.f.) (4736 s.f.)

Intent: To renew and enhance this existing performance/lecture space within the County Fair Building in a way which:

- Will have a strong and attractive presence within the landscape of the Gardens.
- Through the application of new materials and finishes, will have a warmer character than the existing auditorium, as well as its own unique identity among the other rooms.
- Will use finish materials, especially wood, in a way that demonstrates ecological and horticultural principles.
- Through new acoustical, lighting, and pinup/presentation elements, will be more functional.
- Will have a direct relationship to its adjacent outdoor space, and a place in the Gardens.



**Physical
Description:**

New elements such as the hanging ceiling panels will improve acoustics, provide indirect lighting, direct stage lighting and lighting for pinup walls for presentation. These panels will be finished in a wood veneer of native tree species unique to the overall renovation, giving the space both an intimacy of scale and a unique identity within the CFB complex. Other new functional elements include built-in cabinets (also made of native-species veneer panels, where appropriate) for storage of chairs and tables; these cabinets will also function as pinup/presentation space, a source of indirect up-lighting, and as mechanical-system delivery points; coat-hooks could be made from site-harvested trees. Upgrades to the existing heating system will greatly improve acoustics during presentations. An integrally colored, stucco plaster treatment will be given to the perimeter walls of the Auditorium to mark it as a distinct volume both from the interior and the exterior.

The inoperable glazed corner facing the Plaza will be opened up with a pair of large sliding glass doors, covered by a copper clad awning. This new open corner will functionally connect the Auditorium space with a securable exterior courtyard adaptable through the use of retractable fabric awnings, and will increase the rental area of the building.

Pairing the Auditorium with a coverable outdoor courtyard will greatly improve character, giving a clearer sense of its place and purpose within the Gardens; it will also improve its function and adaptability to many different uses, from formal receptions to fundraising plant sales.



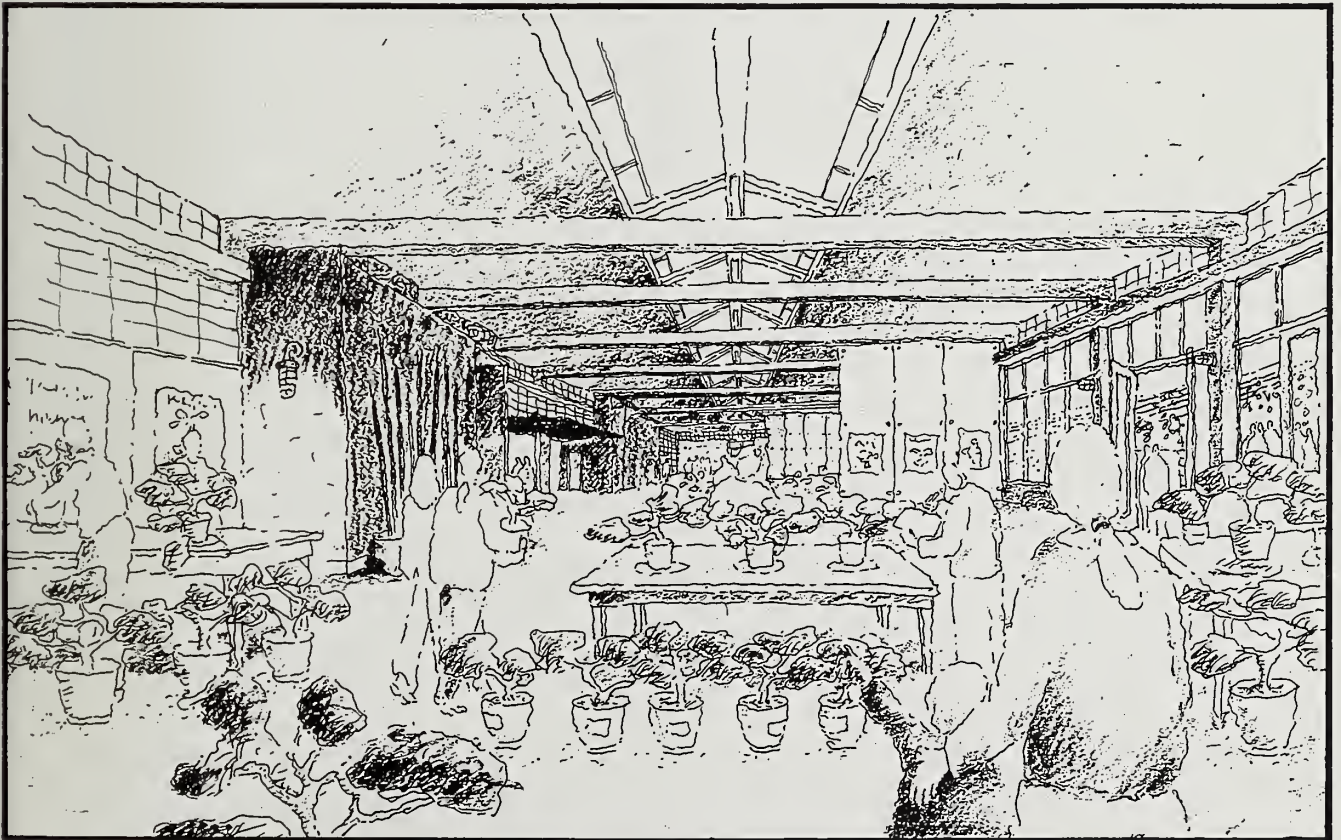
Gallery and Prep Room -- Areas #12 & #13

(7292 s.f. total including new WC #17)

Intent:

To create a multipurpose, flexibly partitioned space within the existing County Fair Building, still specifically adapted for flower and plant shows, in a way which:

- Will increase the use of the Gallery by making it divisible into 2 or 3 smaller spaces.
- Will have a strong and attractive presence within the landscape of the Gardens.
- Through the application of new materials and finishes, will have a warmer character than the existing spaces.
- Will use finish materials, especially wood, in a way that demonstrates ecological and horticultural principles.
- Through new lighting, and pinup/presentation elements, will be more functional.
- Will have a direct relationship to its adjacent outdoor space and a place in the Gardens.



**Physical
Description:**

New elements include built-in cabinets (made of native-species veneer panels where appropriate) for storage of tables used for flower shows; new coat-hooks could be made from site-harvested trees. The existing glass block skylights will be replaced with retractable translucent glazed skylights. Fixed skylights will be added to the Gallery's East Porch as well, to bring more natural light to this dark area. Pinup space, along with appropriate direct lighting, will be added along the west wall and along the operable partition walls. New indirect lighting will be added throughout the Gallery. The East Porch roof, perhaps the Gallery's most conspicuous architectural element, will be clad in copper. The existing plant columns that support the East Porch will be restored and replanted with vines. Existing concrete block walls will be stained and sealed to maintain a dialogue with the CFB's existing architectural character while increasing its warmth. Finally, new glass doors to the Auditorium Courtyard and Plaza will be added to improve the connection to the Gardens, and to increase rentable area.

While the importance of the Gallery as a place for flower society shows is acknowledged, this space must also be made more inviting and adaptable to other potential users; the operable partition walls, operable skylights, improved lighting and upgraded material finishes will contribute to this end.

**Administrative Offices -- Area #18
(2658 s.f.)**

Intent:

To provide specifically programmed offices, storage, and circulation spaces within the existing County Fair Building, which:

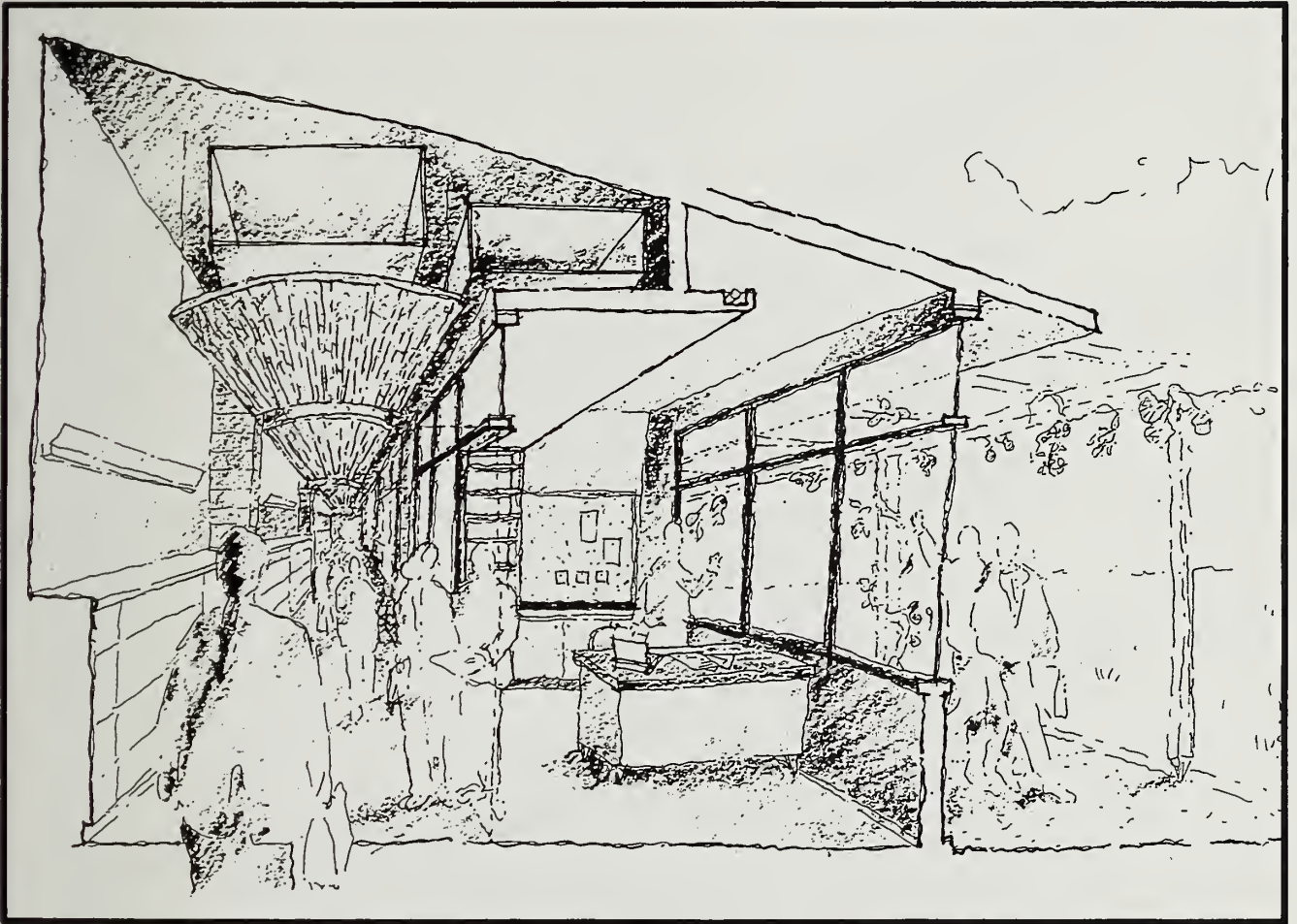
- Will be located as close together as possible, providing critical spatial adjacencies.
- Will establish a clear circulation pattern having a direct relationship to adjacent outdoor spaces and, by extension, a place in the Gardens.
- Through the application of new material finishes, will have a warmer character than the existing spaces.
- Will use finish materials, especially wood, in a way that demonstrates ecological and horticultural principles.
- Through new lighting, pinup, and storage elements, will be more functional.

**Physical
Description:**

The principal entry to the Administrative Offices from the Library Courtyard will be marked by a copper-clad awning. The entry vestibule frames a view through to a vine-covered arbor to the Staff Court and the Gardens beyond. The corridor receives natural light from direct views into the Library Courtyard at the north end, and from borrowed light through the Offices at the south end. This south corridor also has indirect artificial lighting, and built-in file storage along one side. The offices themselves have built-in storage and work-space, indirect artificial and natural lighting, and either direct views of the Gardens or borrowed views into the Library Courtyard.

These offices are the heart of daily indoor activity for the Gardens. As the headquarters for an institution that is intimately linked with landscape and gardens, it is very important that the renovation enhance the relationship of the offices to the outdoors. This will be achieved through an adjacent arbor framing views from each office to an open green area -- an extension of the Asiatic

Collection (an area reclaimed from existing parking). Direct links to the Gardens will be a constant reminder to the users of their proximity to this resource.

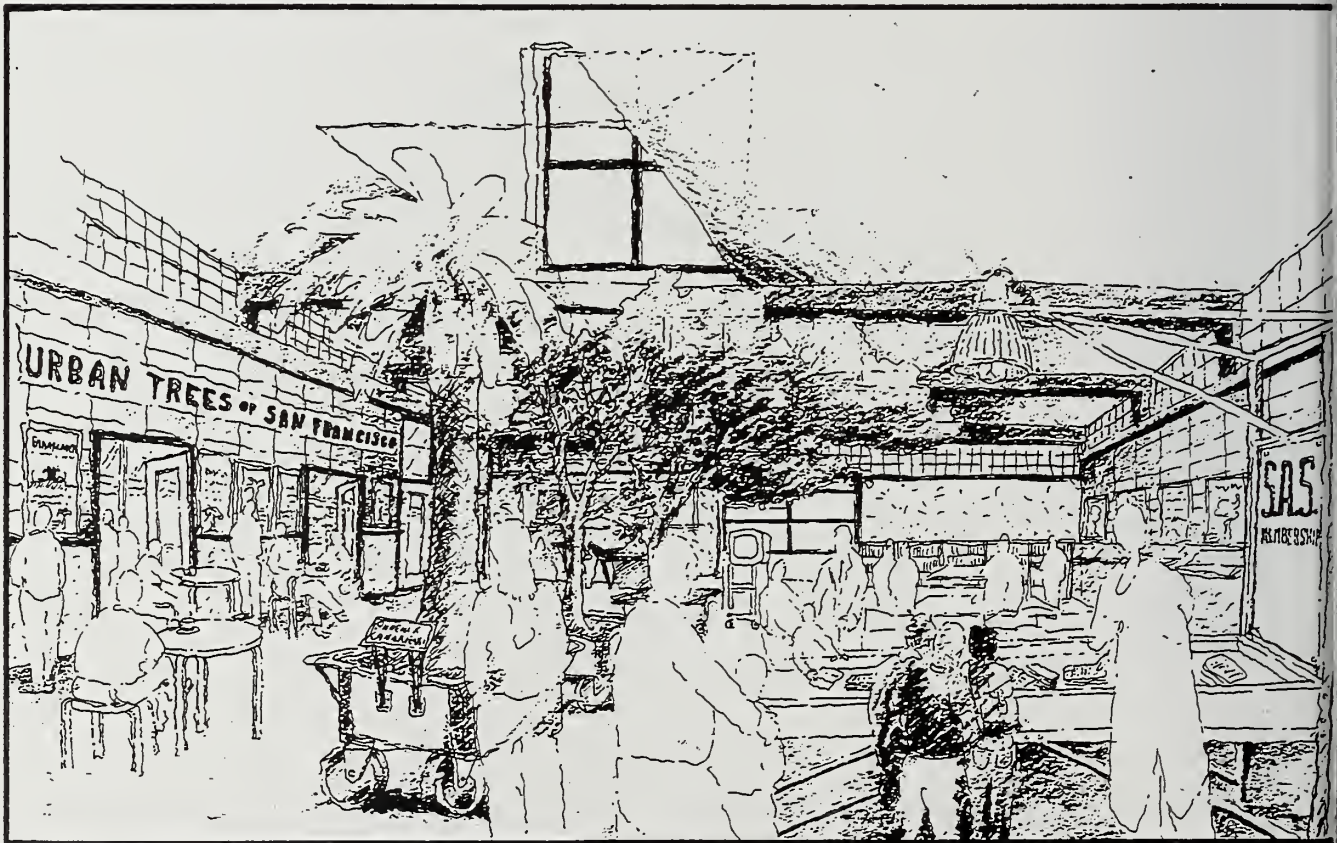


Orientation Center/Bookstore -- Area #16 (1580 s.f.)

Intent:

To create a main entry, gathering, and meeting place within the existing County Fair Building which:

- Will provide orientation and information on the missions of the Gardens and their permanent and changing collections.
- Will house changing exhibitions on horticultural subjects.
- Will accommodate an enlarged Arboretum Bookstore that will make the CFB more inviting to the public at large, generating a good deal of revenue.
- Will have a strong and attractive presence within the landscape of the Gardens.
- Through the application of new materials and finishes, will have a warmer character than the existing building.
- Will use finish materials, especially wood, in a way that demonstrates ecological and horticultural principles.
- Through new lighting, and display elements, will be more functional.
- Will have a direct relationship to its adjacent outdoor space and a place in the Gardens.



Classroom, with its retractable fabric awnings, provides a flexible outdoor teaching space.



Inside the Classroom are sinks, chalkboards, bulletin boards, large worktables, and moveable growing boxes for seedlings. When not made from native species veneered panels, or from site-harvested trees, all cabinetry and finish carpentry in the Classroom, Education, and Volunteer support spaces could be made from various engineered wood products (such as formaldehyde-free particle board and oriented strand board) that are made from recycled wood, wood by-products, or harvested from responsibly managed forests.

It is very important that the Classroom have direct and easy access to educational outdoor space/gardens for hands-on teaching and projects. Its intimate relationship with the Education Wall on the Esplanade side and the Children's Garden side will make the Education Center an invaluable educational tool.

Education Wall -- Area #22

Intent:

To create a formal edge to the Esplanade that:

- Will have a distinct civic presence on the Gardens Esplanade, and will be an integral part of the Gardens, connecting the Education Wing buildings to the landscape.
- While forming a strong edge to the Esplanade, will allow visual access to education activities and frame views into the Gardens beyond.
- Will function both as an entrance and a security barrier for the Education Wing, its Courtyard, and the Children's Garden beyond.
- Will be an armature for displays and information about the Gardens, including a memorial section dedicated to recognizing Donors.

Physical Description:

A long, stone, garden wall traverses the length of the Esplanade, leading from MLK, Jr., Drive past the CFB and turning at the Ellipse to follow its gentle curve into the Gardens. Along its length, the Wall is punctuated with events related to its immediate setting in the Gardens: just inside the gate, a cast-concrete relief map of the Gardens could be built into the Wall, adjacent to the Cafe seating area; a break in the wall acknowledges the preexistence of a monumental Cypress tree as old as the Park itself, and representing the specific design strategies of the original Park planners; a trellised entry through the Wall, to the Gardens beyond, leading to the North Gate of the Gardens; the copper-clad roofs of the Education Wing pop up above the wall, suggesting that something interesting and important is happening on the other side; here also, changeable, window displays appear within the Wall; the Classroom itself pops over the Wall with its south facing "greenhouse"; this is followed by open wood grilles, allowing views into the Education Wing Courtyard, itself planted with vines and built around an existing Japanese Maple; another special exhibition window is followed by framed views into the Gardens and finally, as the Wall meets the Ellipse and curves away, a bench and list of Donors is mounted into its stone surface.

The Education Wall will be a particularly powerful experience and symbol of the Gardens, both as a social institution and as a place, representing an especially rich opportunity to contribute to the public realm of the Gardens, the Park, and the City.

Nursery Complex and Grounds -- Landscape Cost Opinion Item #25

(± 1.8 acres, excluding footprints of structures)

Intent:

To provide nursery facilities of adequate size in an appropriate location and to allow:

- Expansion of SABG growing, research and experimentation programs.
- Minimal visual impact.
- An opportunity to educate the public about the techniques in practice at the Nursery Complex through interpretive signage.
- Space for preparation, storage and growing of plants leading to increased funds through sales.
- Encouragement of volunteer participation with improved parking, lighting, security and modern facilities.



MASTER PLAN

STRYBING ARBORETUM & BOTANICAL GARDENS
SAN FRANCISCO, CALIFORNIA

sponsored by:

THE STRYBING ARBORETUM SOCIETY

in cooperation with:

THE SAN FRANCISCO RECREATION & PARK COMMISSION

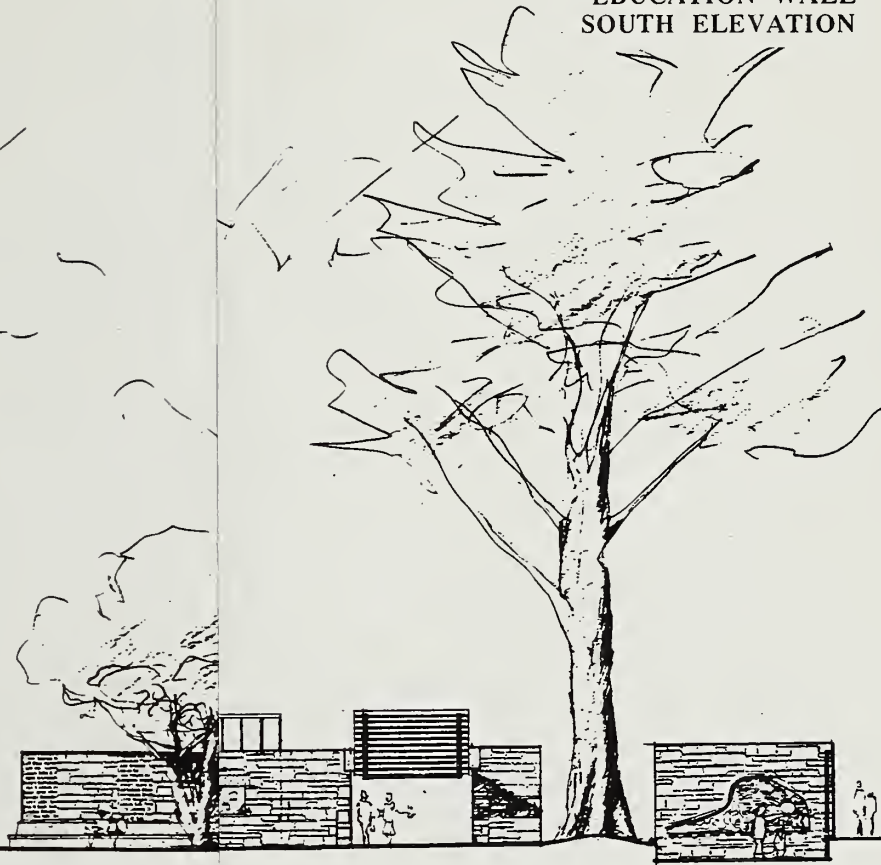
landscape architects:

TITO PATRI & ASSOCIATES

architects:

FERNAU & HARTMAN

EDUCATION WALL SOUTH ELEVATION





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landscape architects
TITO PATRI & ASSOCIATES

architects
FERNAU & HARTMAN

EDUCATION WALL
SOUTH ELEVATION



**Physical
Description:**

The buildings, work and storage areas should be located within the complex in a manner which allows full development of the western end of the Gardens. Visual impact will be minimized by fitting these into existing slopes.

The sizes of buildings and grounds for this element are taken primarily from a program established by an earlier planning committee working with Architect James Leafe in 1991. It was refined and updated with the help of the Master Plan Steering Committee and should meet the Gardens' needs for several decades.

Headhouse	2,264 s.f.
Potting shed	560 s.f.
Shadehouse	3,722 s.f.
Garage	528 s.f.
Greenhouse	4,100 s.f.

Other special architectural features include a raised overlook with explanatory display panels (at the south end of the Headhouse) to allow the public to see and learn from the workings of the nursery; a potting shed with a sloping sod roof; storage areas under the shade house and main working terrace; and a public restroom.

Site improvements include:

- 16 parking spaces
- 1 HC parking space
- Ramps for wheelchair access between all Nursery Complex components
- Earth materials bins
- Container storage and growing grounds
- Security fencing

A new fence and gated entry ways will encircle the site, securing approximately 30,000 s.f. of growing grounds primarily to the west of the greenhouse. Ramp and stair connections will meet ADA standards. A roadway, sloping at a maximum of 12%, will provide one-way access for service vehicles (entering off Lincoln Way and exiting onto MLK, Jr., Drive). Materials bins could be easily accessed under the shade house.

The paved roadway is configured to minimize visual impacts of the 16-space parking area, which will be screened by planted mounds and banks. With the exception of a paved central working courtyard, the court and service areas will be paved with stabilized granular paving (such as decomposed granite), as will most of the pathways in the growing grounds. The general area of plant container storage should be treated with a gravel layer to reduce maintenance provide for a relatively even, stable surface for on and off-loading of materials.

Growing grounds will be generally reconfigured on a south-sloping plain and planted with wind screens along the main pedestrian pathway (outside the complex) and at 20- to 30-foot intervals within the complex. These screens will be aligned north-south to lessen prevailing winds and provide relatively wind-protected pockets for the young plants. This screening effect could also be accomplished with low planted, eccentrically shaped (in cross section) berms.

A broad path will lead up a ramp from the main garden path to a raised overlook (also gated or securable at night). This same pathway will provide access to a public restroom and telephone.

The overlook will include an interpretive plaque explaining basic functions of the complex, such as the stages of development of usable plant material from seed germinating through potting, hardening and storage. The overlook is placed in relation to outdoor work areas making these functions visible -- a major design principle of this plan. The interpretive materials will help generate public appreciation and support for the workings of the Gardens.

Implementation of this component will require a detailed topographic survey of all surface and subsurface conditions, followed by more detailed programming based on staff and volunteer workshops. More refined design drawings would follow.





MASTER PLAN

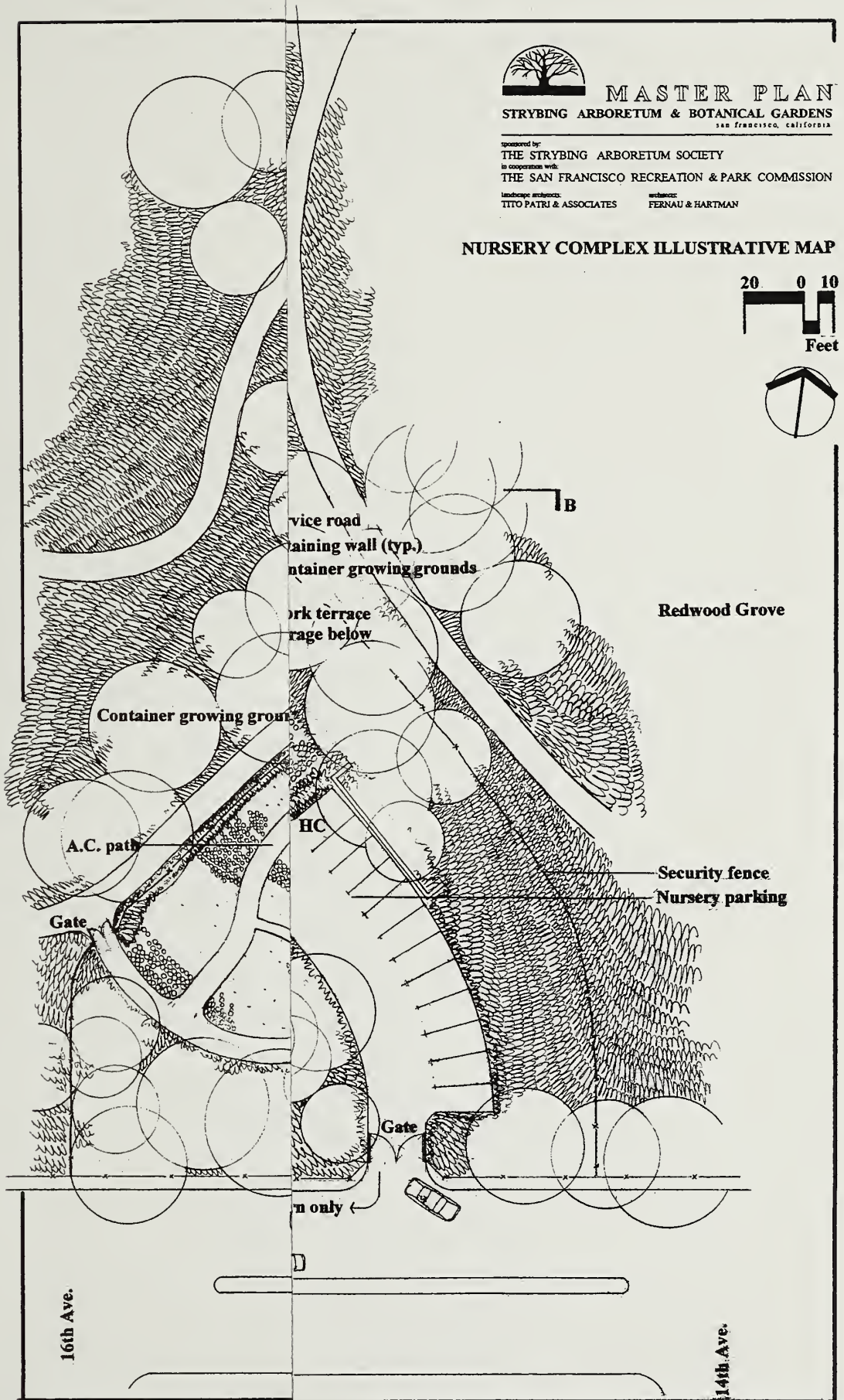
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landscape architect:
TITO PATRÍ & ASSOCIATES

architect:
FERNAN & HARTMAN

NURSERY COMPLEX ILLUSTRATIVE MAP





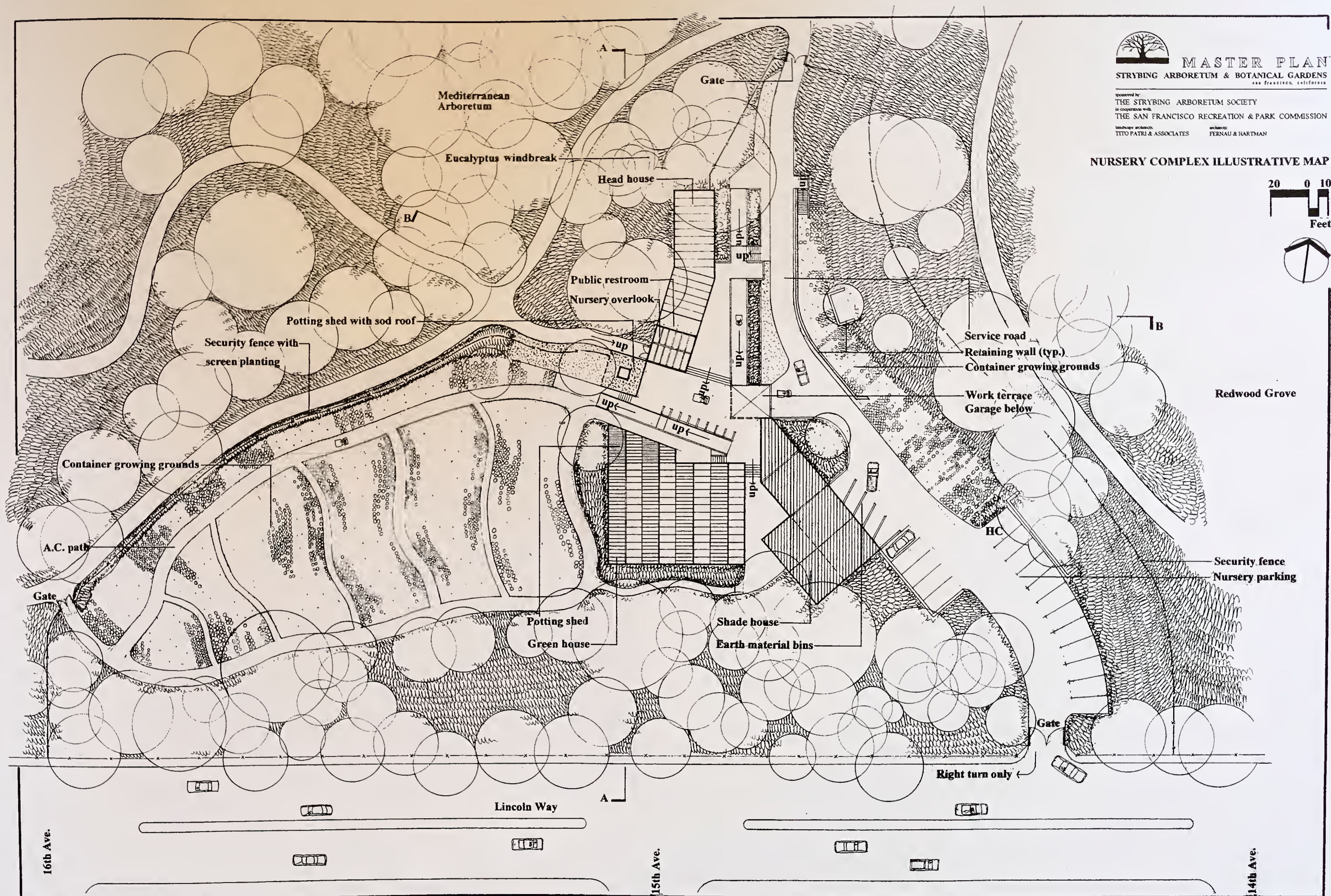
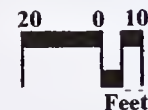
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SAN FRANCISCO, CALIFORNIA

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LANDSCAPE ARCHITECTS:
TITO PATRI & ASSOCIATES

ARCHITECTS:
FERNAU & HARTMAN

NURSERY COMPLEX ILLUSTRATIVE MAP





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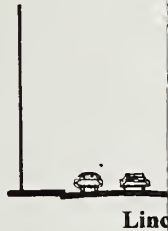
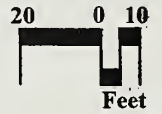
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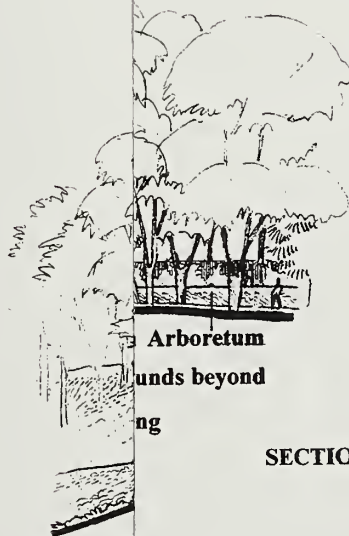
architect:
FERNAU & HARTMAN

NURSERY COMPLEX



Arboretum beyond

SECTION A - A



Arboretum

lands beyond

ing

SECTION B - B



MASTER PLAN

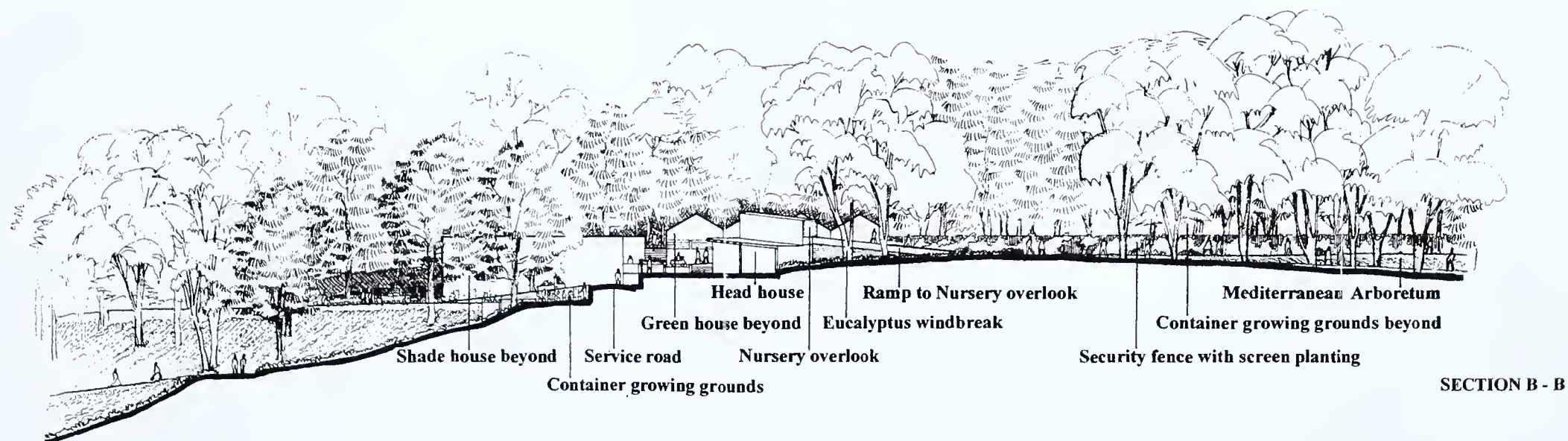
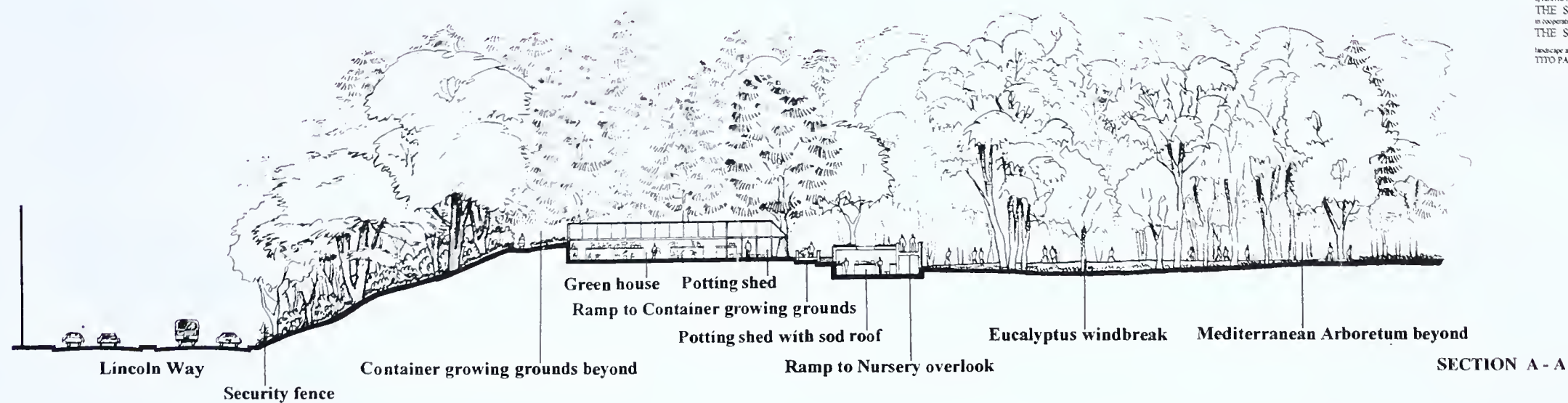
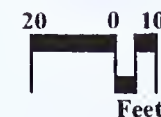
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landscape architect:
TITO PATRI & ASSOCIATES

architect:
FERNAN & HARTMAN

NURSERY COMPLEX





*Major
Landscape
Design
Proposals*

CHAPTER 3

MAJOR LANDSCAPE DESIGN PROPOSALS

Design Principles

The thirty-plus landscape renewal concepts presented in this section are based on the following design principles:

Principle 1: *Formulate an open space network creating and protecting existing variously sized vistas, clearly defined spaces (with vegetated walls or slopes), varied areas of seclusion from or visibility to adjacent main park roads.*

Principle 2: *Identify and open up carefully located view "windows" from key pedestrian or vehicular routes or intersections along MLK, Jr., Drive to enhance visibility, security and SABG identity, especially in relation to existing or future gates.*

Principle 3: *Modify (redesign) Main and Friend Gates to make them more attractive, visible (day and night), welcoming and active. Coordinate with information, display, orientation center and educational programs.*

Principle 4: *Modify (redesign) SABG side of 9th Ave./Lincoln Way intersection to increase visibility, attractiveness and activity with appropriate beds, displays, renovated or new plazas, pathways and furnishings. Coordinate with Recreation and Parks as well as the Department of Public Works.*

Principle 5: *Convert "Demonstration Gardens" to a more flexible format, such as a type of year-round garden show with more changing exhibits of hard- and softscape materials and design and maintenance ideas. Consider commercial sponsor participation under strict guidelines (including time, signage limits, etc.).*

Principle 6: *Establish a program of monitoring areas and features (based on this M.P.) with the goal of setting physical thresholds (e.g. pedestrian path capacity) and limits based on environmental quality (the number of people and/or other disturbance types which destroy the sense of sanctuary of many spots in the Garden).*

Principle 7: *Link all educational and interpretational messages with common graphic languages, reinforced where appropriate with consistent landscape settings.*

Principle 8: *Locate, design and remodel pathways (and signage) so that the hierarchy of major and minor paths is clear to the visitor and even draws the visitor through an organized series of garden experiences.*



Main Entry Plaza -- Cost Opinion Item #1

(± 48,900 s.f.)

Intent:

To create a single main entrance for SABG which:

- Will be clearly announced and inviting to visitors.
- Will re-create the atmosphere of a market square with its activity, "hustle and bustle," ongoing exhibits and periodic events.
- Will provide a human scale with simple landscape walls, tree groves, curving entry gate with vine screens and the buildings themselves.
- Provide orientation for visitors to Golden Gate Park through its focus on the Bookstore and Orientation Center
- Enhance visibility and activity levels of the Cafe and Bookstore through their location and configuration.

Physical Description:

This area contains three important subelements: the Promenade with its attendant planting zones taking the visitor from the bus stop plaza at Lincoln and 9th to the Main Entry plaza; the Auditorium Courtyard with retractable fabric roof (to be used in conjunction with day or night activities in the auditorium and gated for security); and the central area of the Main Entry Plaza.

The most prominent components of these features include:

- 1) A 12-foot-wide stone-edged Promenade, from the bus stop plaza to the main space;
- 2) Over 20,000 sq. ft. of finished colored concrete paving panels edged with cobble-type pavers. The panels could be imprinted with donors' names or with appropriate brass plaques. The use of cobbles refers to the historic use in San Francisco, and the grid of concrete panels they define reflects the CFB's existing modular design. This design theme is used in other main gates and features throughout the Gardens;
- 3) A French bosque of 9 small canopy trees set in stabilized compacted granular material, providing a pleasant setting for marketing or display of plants, horticultural supplies, etc., on portable stands and carts;
- 4) A 1,200-foot-long curving screen connecting with Friend Gate wall, terminate with an 18-foot-wide curved rolling gate at the new Cafe, Bookstore and Orientation Center. The name of the Gardens, in metal outline letters (selected for optimal visibility) will be cantilevered from the leading edge of vine-covered dividers. These dividers of rigid fabricated or perforated metal will be repeated at intervals (at Glimp Gates) along MLK, Jr., Drive;
- 5) Sloping display beds and a low wall combining seating and concrete columns supporting a retractable overhead fabric roof defining the auditorium courtyard;
- 6) A 20-foot sign column with colorful banners and changeable fabric letters announcing current or upcoming events;
- 7) A parking pocket for two buses as well as "blue curb" parking and curbside cut ramp locations for disabled persons;
- 8) A grove of small trees screening the eastern end of the Rental Wing;
- 9) Planted panels and rows of annual or other plant material display beds visible from Lincoln Way and 9th Avenue;
- 10) A group of coniferous trees planted to replace the existing pines and cypress trees, which will die out in the next 10 to 20 years;

- 11) A series of lockable brass pole sleeves (set into the ground with tops flush to surrounding pavement) distributed in the French bosque area for portable fencing posts. These will be useful in securing larger areas of the plaza as needed for certain events or plant sales. Other sleeves will act as sockets for temporary banner poles.
- 12) Planting display beds, matching the 9x9 paving panels. These will create transition zones at the edges of the Main Plaza to surrounding planted areas.

This area is one of several that could begin transformation even before renovation of the CFB. Simple but highly visible changes, such as installation of banner poles, will signal change at SABG and improvement to passers-by, translating potentially into increased support (membership, donations, volunteer participants, etc.).

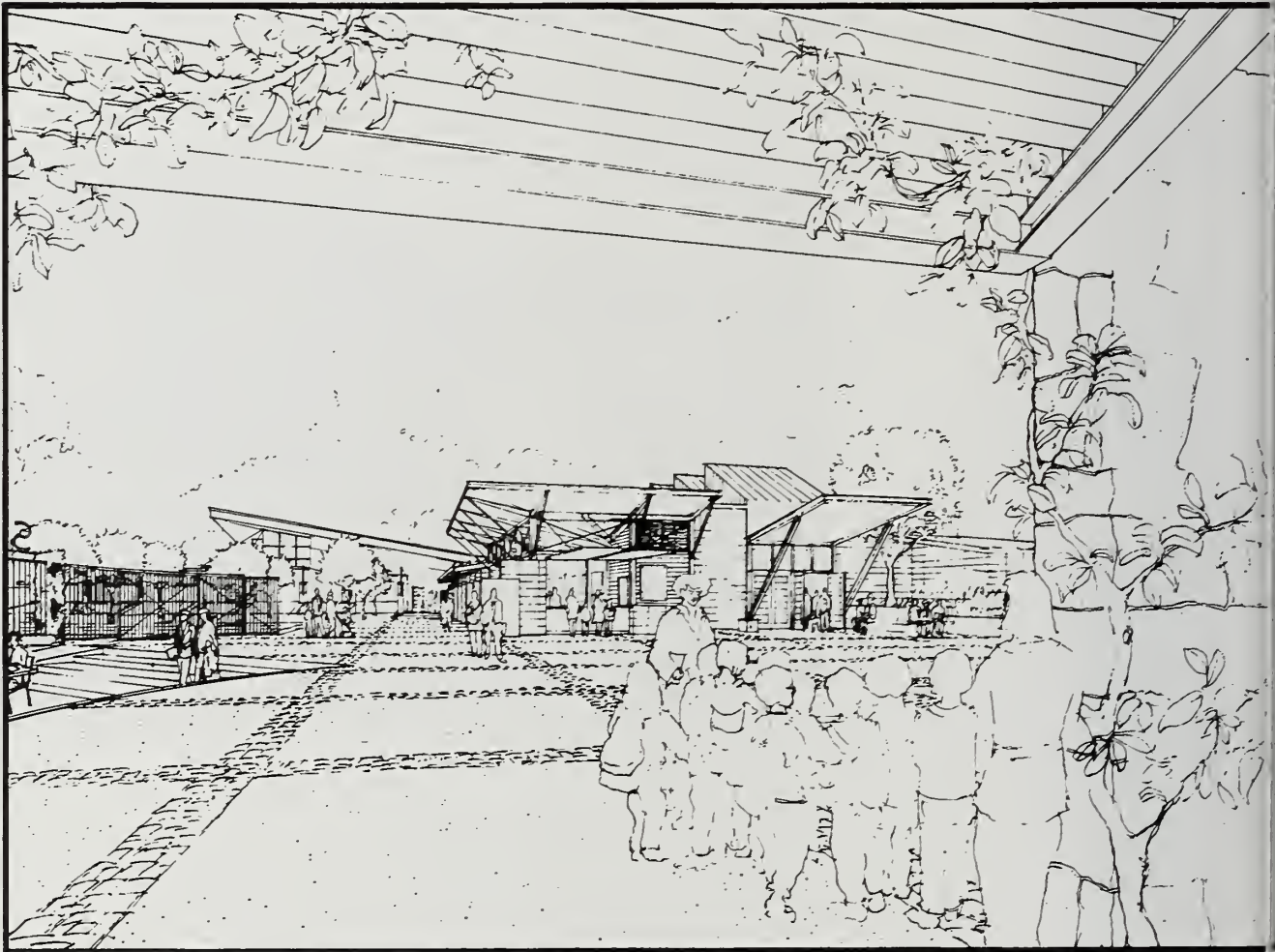


Esplanade – Cost Opinion Item #2
(± 16,600 s.f.)

Intent:

To redesign an important, already well-defined space so that it will:

- Serve as an internal center of activity and movement (in contrast to Main Entry Plaza) that is visible from outside the Gardens.
- Convey an overall sense of SABG's mission to the visitor.



**Physical
Description:**

The Esplanade will unite the entrance to the Helen Crocker Russell Library of Horticulture, the Education Center, the Bookstore and Orientation Center and the Promenade connection to Friend Gate. It will introduce the major mission and primary functions of SABG with surrounding plant exhibits, displays in the

"Education Wall," views into the Bookstore and Orientation Center, the Education Classroom and Gardens. A sunken turfed sculpture-and-cafe garden will provide respite from the wind and on warm days an opportunity to sit at small portable tables. This area will also serve as an attractive setting for temporary exhibits, possibly relating sculptural arts and horticulture. Finally, a single large sculpture should be considered on the center line of the Esplanade to provide a terminus for the important axial vista from the Main Fountain. The important adjacent Education Wall is described in Chapter 2.

As in the Main Entry Plaza, the main paving materials are highly finished colored concrete with cobble-type edger bands and dividers on a 12-foot module. Over 4,000 s.f. of raised planting beds will be available for plant and flower displays.



World Conservation Garden Exhibits -- Cost Opinion Item #13 (± 33,000 s f)

Intent:

To create a series of special, high profile educational exhibits which will:

- Educate visitors about critical plant-conservation issues.
- Present an ecological perspective of the relationship between plants and total environmental conditions.
- Illustrate the concept of human dependence on the world of plants.
- Be easily available from the Promenade, providing an information-filled, visually attractive short course for those visitors with only enough time to visit this portion of SABG.
- Be placed along the Promenade, drawing visitors from Friend Gate eastward to the renewed Main Gate and CFB area.



Six gardens, semienclosed with irrigated perimeter hedges, will be aligned along the Promenade. These will present interpretive information regarding the temperate zones of six continents:

- Lot A: Asia
- Lot B: South America
- Lot C: North America
- Lot D: Europe
- Lot E: Africa and Madagascar
- Lot F: Australia/New Zealand

If feasible, endangered plant species from each of the six continents could be grown in these gardens.

**Physical
Description:**

Clusters of trees found in each continent will highlight the entrance to each garden and form the primary leafy arcade along the Promenade. The entrances will be formed with a gateless arbor leading to a small courtyard defined on one or two sides with benches and with interpretive displays or plaques. These will be placed to draw visitors into the gardens where meandering pathways will lead them to interpretive displays and plantings. Displays could range from permanent platen signs (with maps of the subject continent and descriptive text on the endangered plants and related conservation issues) to temporary constructions by children participating in SABG educational programs.

Research into relevant habitat and plant conservation issues for each continent will be needed to realize these gardens. Topographic surveys of the garden area should also be initiated and should include location and ground elevation of significant trees to be saved, existing utilities, etc.

Promenade – Cost Opinion Item #32
(+ 1,280 l.f.)



Intent:

To provide an attractive clearly defined landscape experience that will:

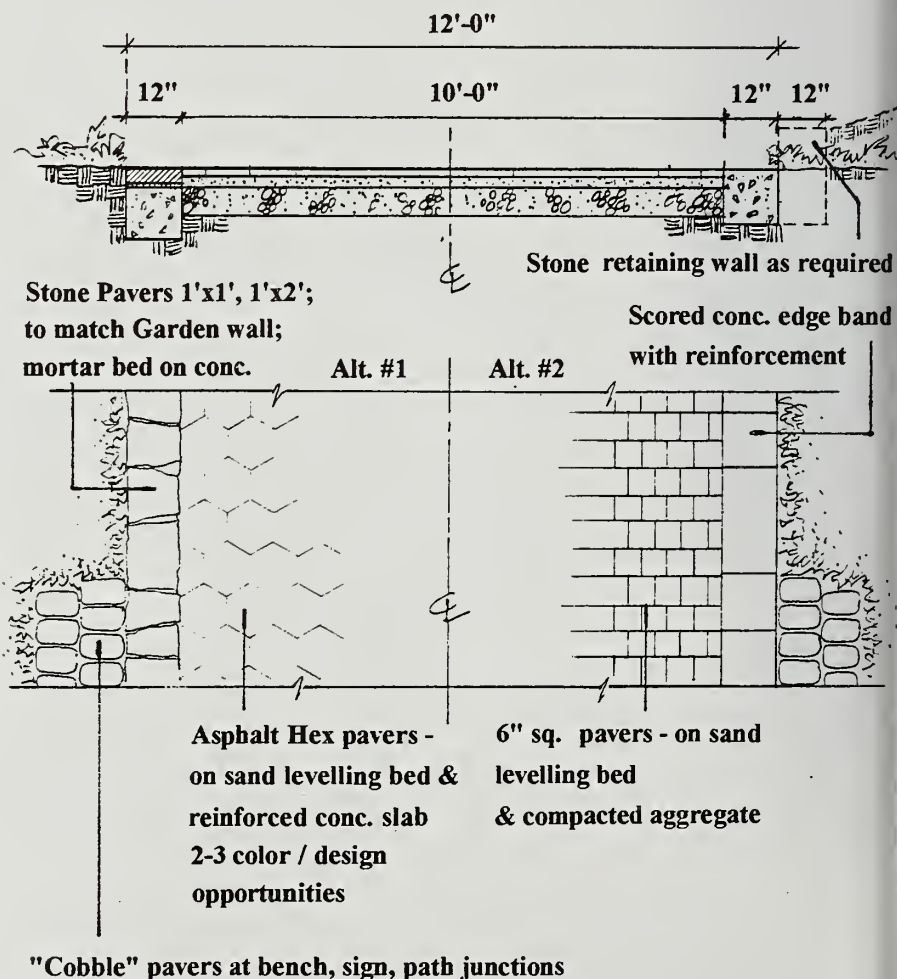
- Serve as an educational link between the Friend and Main gates.
- Enhance greater visitation of the Education Center and Orientation Center/Bookstore.
- Serve as a short introduction to the mission of SABG and to the features and collections it offers.

Physical Description:

The central element of the corridor is a +1,480-foot-long, 12-foot-wide paved promenade of special handlaid asphaltic pavers flanked by cobble-type bands providing a distinctly formal look. The band is reinforced with low handhewn limestone-type retaining walls where dictated by slope conditions.

Periodic clusters of trees will be planted at the entrance to various gardens (e.g. World Conservation Gardens, Demonstration Gardens or other features). Regularly spaced low pathway lighting will provide for a strong linear experience at night, especially for special events at the Thomas Church Pavilion and Glade Four Glimpse Gates aligned along the existing MLK, Jr., Drive pathway (roughly parallel the proposed Promenade) will suggest a linear "event" between the Main Gate and Friend Gate, encouraging visitors to enter the Gardens.

Two options for the design of the Promenade pathway are illustrated below.



Both alternatives are designed to supply an appropriate level of refinement, even though it is estimated that the typical conditions shown on the left will be more expensive to install than those on the right.

Alternative 1, on the left, illustrates the use of a hexagonal-shaped compressed asphalt paver placed on a sand-leveling bed over a compacted aggregate base. Because these pathways are designed to be used by small trucks, all edging bands should be reinforced with concrete below grade. All pavers will be placed in a mortar bed. To the outside of the 12-inch wide stone edger, cobble-type stone with a rougher finish will expand the stable paved area as necessary where the Promenade is joined by minor paths or at the entrances to Demonstration Gardens or Conservation Gardens, or where signage or benches are planned.

Alternative 2 illustrates the use of a scored concrete edge band instead of cut stone pavers and an in-fill of 6-inch-square compacted asphaltic or similar unit pavers. Final design of all underlying reinforcements should be determined by a soils and/or structural engineer.

Demonstration Gardens – Cost Opinion Item #10

± 54,000 s.f.)

Intent:

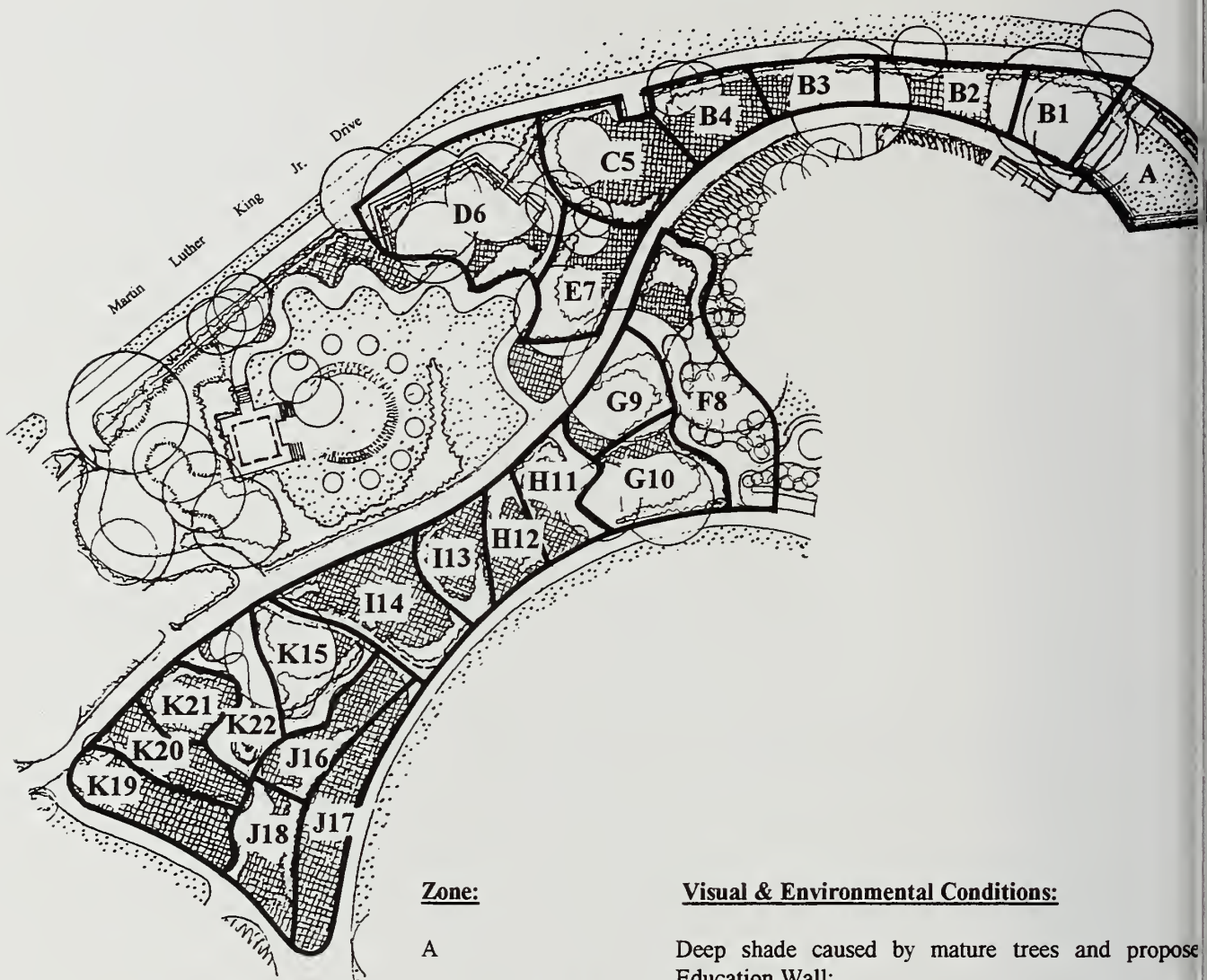
To establish Demonstration Gardens which:

- Are more visible than existing gardens to the public from inside the Gardens and to a lesser extent to pedestrians along the MLK, Jr., Drive sidewalk;
- Are more closely integrated with the activities and functions of the CFB and the Education Center;
- Are less of a capital and maintenance burden on SABG;
- Reflect “state of the art” standards in all aspects of gardening and anticipate change by allowing for more frequent replacement of exhibits (for example, hardscape materials exhibits should be easily removable instead of permanently installed);
- Effectively inform visitors about everything from the type and source of materials used to the philosophy and environmental implications behind different garden qualities and uses;
- Could potentially be designed, installed and maintained by outside sponsors in accordance with standards set by SABG.

Physical Description:

Although the Demonstration Garden area consists of eleven environmental zones broken into 22 lots (actual gardens), the demonstration of garden design ideas (hard and soft) need not be limited to the area shown. In the Main Entry Plaza and the Esplanade, moveable display carts and plant material display beds should be employed. The Education Wall may also be an appropriate candidate for display components.

The eleven zones reflect generally uniform physical conditions, such as exposure to sun and wind and the slope and orientation of the ground. The shape of lots reflects convenient sizes reflecting varying visibility, existing trees, etc. The following list summarizes the physical conditions of each and notes the lots included within each zone.



Zone:

- A
- B (Lots 1, 2, 3 & 4)
- C (Lot 5)
- D (Lot 6)
- E (Lot 7)
- F (Lot 8)
- G (Lots 9 & 10)
- H (Lots 11 & 12)
- I (Lots 13 & 14)
- J (Lots 16, 17 & 18)
- K (Lots 15, 19, 20, 21 & 22)

Visual & Environmental Conditions:

- Deep shade caused by mature trees and propose Education Wall;
- Partial shade, narrow strip with shallow depth between path and fence;
- Relatively sunny, sloping to the east;
- Partial shade caused by mature trees, raised terrace;
- Partial shade, sloping to the east;
- Sunny with level and sloping ground, moderately exposed to winds;
- Partial shade, west-sloping, exposed to prevailing winds;
- Partial shade, mostly level, exposed to prevailing winds;
- Sunny sites, mostly level, exposed to prevailing winds.
- Sunny, convex topography, south and west face exposed to prevailing winds;
- Sunny, relatively good wind protection from Heidelberg Hill.

Some of the themes for different kinds of demonstration gardens offered by staff, volunteers and these consultants are listed below. Over time, the list of potentials will grow as new techniques and materials become available and as values change. In choosing themes, the visibility of each lot and its relation to surrounding permanent exhibits, features and circulation should be considered.

Potential Theme Gardens:

Wind and Fog Tolerant Plants
Dry Plantings
Sand Tolerant Plants
Low Maintenance Gardens
Annual and Perennial Color in the Shade
Formal, Traditional and Modern Gardens
Informal and Naturalistic Gardens
Front Yard Gardens
Gardens for Complex Parcels
Edible Landscape
Entertainment Gardens
Windbreaks
Hidden Gardens
Planting in Acid or Alkaline Soils
Special Plant Groupings (i.e. Grasses, Annuals, Shrubs, Small Trees, Historical Plants)
Turf and Lawn Substitutes
Hybrids and Cultivars

In the Demonstration Gardens, lots will be divided by low shrubbery or hedges. Improvements to this area will be limited to pathways, signage and site preparation (i.e. basic and finished grading, provision for drainage, perimeter planting and irrigation). The existing stone wall which forms the barrier between the sidewalk on MLK, Jr., Drive and Lot D-6 is proposed for retention. Since there is a security problem here, fencing obscured in a moat with vegetation will be required on the raised terrace level side of this wall. The wall, which faces the intersection of Middle Drive East, provides an opportunity for signage announcing SABG.

The identification of potential sponsor groups as well as an evaluation of their interest level and eventual participation in demonstration gardens is needed. Professional design associations (i.e. AIA, ASLA, CCLA, etc.) as well as "green industry" suppliers and garden clubs -- both large and small -- should be considered. The construction and maintenance of the demonstration garden could be the responsibility of the sponsor or shared with SABG.

Golden Gate Park Entry Plaza – Cost Opinion Item #3

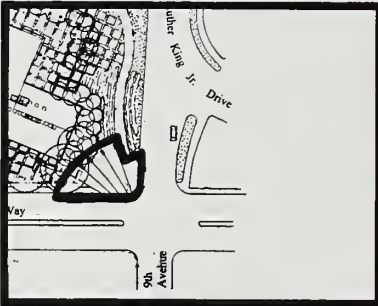
(± 3,280 s.f.)

Intent:

To create a distinctive plaza-type space and gateway entry which will:

- Serve as an entry to Golden Gate Park as well as Strybing Arboretum and Botanical Gardens.
- Be visible at the intersection of 9th Avenue and Lincoln Way.

Physical Description:



This item reflects the 1994 Draft Golden Gate Park Master Plan indicating an important park entrance to Golden Gate Park at 9th Avenue off Lincoln Way. The essential design program should include a bus stop, shelter, appropriate signage (including a map of Golden Gate Park) and prominent architectural entrance or gateway elements such as columns or arbors. It should also serve as a small plaza, distinctly different from the circulation elements of the Main Entrance Plaza to the Gardens. A gently sloping promenade (meeting ADA standards) would connect the two. The plaza could be mirrored on the east side of the 9th Avenue entrance for balance.

SABG should continue to work closely with the San Francisco Recreation and Parks Commission and its planners to insure that the preliminary and final designs for this entrance meet the needs of both the Park and the Gardens.

South Terrace – Cost Opinion Item #4

(± 9,300 s.f.)

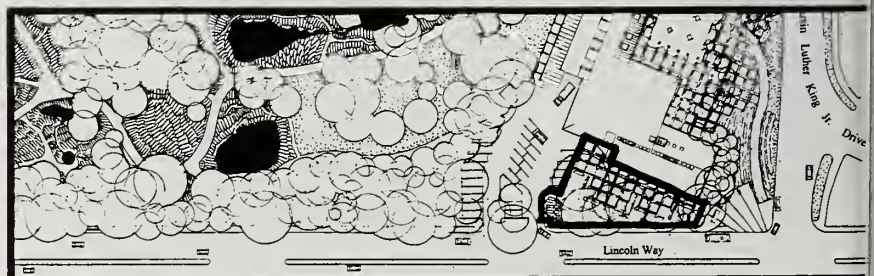
Intent:

To convert the terrace outside the Old Library, kitchen and Rec. Room into an attractive garden environment which will:

- Be cloistered and protected from noise.
- "Blur" building edges with a stronger linkage between the gardens and the rooms.
- Be more visually attractive and functional to attract increased usage.

Physical Description:

The 9x9 module with cobble-type edging bands (described earlier) is repeated here. Low retaining walls alter the shapes of spaces to create a series of outdoor rooms relating to the rental rooms. These are divided by free-standing trellis screens of rigid wire mesh or perforated metal planted with vines. The existing wooden fence along Lincoln Way will either be made solid or replaced with masonry and a stucco finish to match new finishes and colors of the renovated building. The wall will provide greater security and noise protection than the wooden fence. Power outlets and pole sleeves could be incorporated in the wall and pavement to increase usability and rental potential.



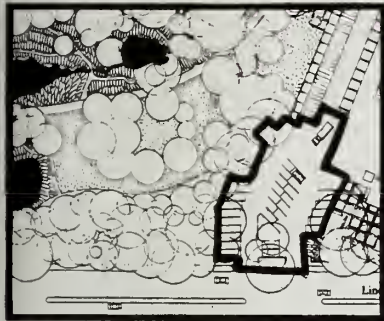
Lincoln Service Gate & Parking Area and Asia Collection Expansion – Cost Opinion Items #5 & #8 (± 2,780 s.f.)

Intent:

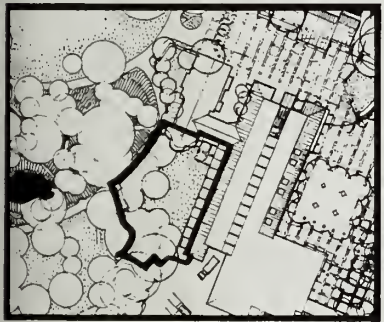
To renovate this area in a manner which will:

- Create a pleasant foreground of planting for the new west-facing Administrative Offices.
- Meet the circulation needs of SABG.
- Meet current ADA standards (with respect to disabled person parking).
- Provide a practical and secure gating system.

Physical Description:



In this reconfigured area, 9,600 s.f. of paving and fill will be removed to allow for 27 parking places and two disabled parking places making use of remaining asphalt paving. For security reasons, the existing gates will be rebuilt or replaced and fitted with electronic opening devices, which could be card-operated by authorized staff and volunteers. The westerly of the two gates will also be open as an exit gate (the easterly being the entrance gate). Only right turns should be allowed onto Lincoln Way for safety reasons. The western perimeter of the parking area will be fenced and the gate to the old service road retained but renovated if necessary. New concrete curbs and gutters, an automatic irrigation system at planting islands and peripheral planting areas, directional and identification signs (including those required to meet ADA standards) will be provided. The northerly portion of the existing parking area will be removed, the original swale restored and the area replanted with an extension of the Asia Collection.



An arbor and walkway parallel to the office wing, as well as a small staff terrace, will be treated with the same paving modules and materials proposed elsewhere around the CFB. The arbor will be planted with vines and the small terrace area elevated slightly above the swale so as to overlook the expanded Asia Collection. For security, the pathway will be gated at its juncture with the parking area.

Construction of the "softscape" portion of this project could be accomplished simultaneously with the revamping of the Lincoln Gate parking area. The hardscape or walkway/arbor/terrace will be constructed when work on the renovated Administrative Offices is completed.

Library Courtyard – Cost Opinion Item #6 (± 2,400 s.f.)

Intent:

To rebuild the Library Courtyard in a manner which will:

- Match existing conditions as closely as possible after construction of underground stacks so as not to lose the cloistered quality.
- Provide an attractive entrance to the Helen Crocker Russell Library and to the remodeled administrative offices.

Physical Description:

This entire courtyard will be placed over a waterproofed reinforced concrete structure with paving and planting to match existing conditions as is feasible. Trees in large containers will replace existing trees. All planted beds and plant containers will include built-in irrigation and drainage systems. A small fountain nestled in low planting could enhance the cloistered effect.

Library Garden – Cost Opinion Item #7

(± 3,000 s.f.)

Intent: To provide an attractive garden foreground (without blocking views of the main fountain) for the west-facing window of the Russell Library.

Physical Description: This improvement is related to the relocation of a major pathway outside the library window (currently home to the Children's Corner). There will be no physical access from the Library, and its main purpose, as with other garden areas adjacent to the building, will be to create visual access from inside the building looking out, thus "blurring" the edges of the architecture.

A seat-height wall of handhewn limestone (or similar stone) mirroring the shape of the Education Wall, opposite, will form the high edge of this garden. A small grove of flowering trees will define its southern edge. Together these will form a framework for more delicate and varied plantings integrated perhaps with a small sculpture or fountain and a cluster of stone pavers for maintenance access.

Children's Garden – Cost Opinion Item #9

(± 19,200 s.f.)

Intent: To serve children and adults with a variety of plant and gardening spaces in a configuration that:

- Places beds and terraces as close as possible to classroom areas for experimentation, demonstrations, "hands-on" planting, etc.
- Helps enliven the CFB area for users and visitors, making SABG education programs more "visible" to the public.
- Better serves the functional and space needs of SABG's expanding education programs.

Physical Description: Overall this feature includes screen planting and emphasizes functional ground level planting beds, raised beds, work areas, storage areas, etc. Its location near the Main Gate will allow more convenient access from a nearby bus loading/drop-off zone. The Garden might include:

- 1) an herb garden (originally planned for the John Muir Trail area);
- 2) outdoor work and picnic tables with weatherproof tool and material storage cabinets;
- 3) soil preparation and compost bins;
- 4) a teaching terrace directly off the main classroom;
- 5) lighting for occasional night use;
- 6) plantings for teaching habitat and ethno-botanical values of different plants;
- 7) a depressed center (24- to 36-inches below the general level) providing room for a potential small pond and "California stream" as well as better supervision from the classrooms and a separation from pedestrian traffic along the Promenade;
- 8) an ADA accessible ramp-and-stair combination which will also allow for a stepped-bed arrangement, enhancing the display of different plant types and conditions;

- 9) a clearing in a cluster of small trees adjacent to the Demonstration Gardens to provide an intimate environment for children's gatherings such as story-telling;
- 10) a reconfigured entrance to the Jean Wolf Garden providing as well an overlook for public viewing of Education Garden activities.



Because of its great educational importance, this garden deserves careful research, planning and design. It may be appropriate to leave selected areas undeveloped while others, such as terraces close to the buildings, could be "fixed" with hardscape. The planning and design process should be integrated with that of the Education Center.

Thomas Church Pavilion and Glade – Cost Opinion Item #11

(± 22,170 s.f.)

Intent:

To provide improvements and renovation to the existing Thomas Church Pavilion which will:

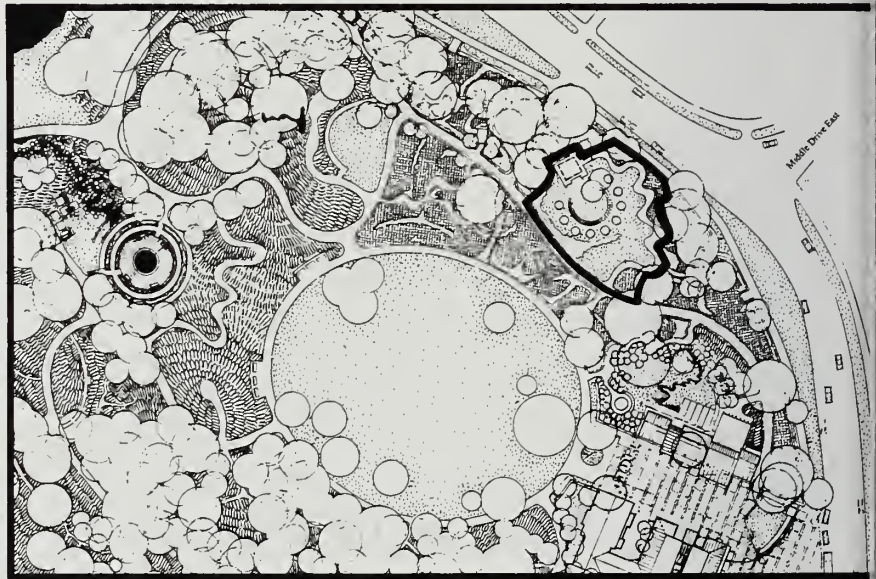
- Insure the site's eligibility for future possible historic-structure designation and its protection as such in the future.
- Provide a more significant and formal glade setting for the pavilion.
- Create a beautiful meadow area that will be attractive and rentable for groups wanting a pleasant garden setting for small gatherings, wedding receptions, memorials and the like.

**Physical
Description:**

This attractive recently restored structure was designed by one of the pioneers of Bay Area landscape architecture and garden design, Thomas D. Church. The area is slightly less than 1/2-acre but could be made to feel much more generous through regrading and removal of several trees which are neither botanically nor visually significant.

Access to the pavilion will be modified, adding a set of steps off the south-facing edge and replacing the mound in that area with a gentle turfed bowl in form orientation to the pavilion. Turf slopes will not exceed five-to-one for ease of mowing. Existing ramps to the pavilion will be replaced if necessary with ones meeting ADA standards, either with gradients under 5% or with ramp/handrail/curb combinations.

Existing service facilities (a sink, work tables, storage cabinets, etc.) will be relocated adjacent to the service yard, but still within convenient reach of the pavilion for servicing and catering. These will be accessible through the service gate at MLK, Jr., Drive.



This feature has the potential to be a substantial generator of funds. A detailed survey of topographic conditions and the location, elevation and value of trees and shrubs is needed for this area.

North Service Gate and Yard – Cost Opinion Item #12
(± 6,290 s.f.)

Intent:

To provide a convenient screened service yard of adequate size which will:

- Be close to the Promenade corridor for easy service access.
- Make use of the existing curb cut, gates location and driveway off MLK, Jr., Drive.
- Provide a 12-foot-wide service roadway connection to the Promenade and the path at the Main Lawn.

**Physical
Description:**

The modification of this existing service area will include a stabilized granular paved surface for storage of tree and shrub cuttings as well as replacement facilities to service the Thomas Church Pavilion and Glade. These facilities will include:

- 1) One 2'x3'6" work table;
- 2) Four 4'x4'x7' weather-proof gardener storage cabinets with lockable double doors;
- 3) One 6'x11' work or dining table;
- 4) Benches.

Power, water and drainage should also be provided at this point. New truck-width gates will be installed and the fence (paralleling the pedestrian walk along MLK, Jr., Drive) will be reconditioned or replaced. The whole area will be gated on the Promenade side and the existing after-hours accessible exit gate will be eliminated.

Heidelberg Hill Overlook – Cost Opinion Item #14

(± 1,500 s.f. excluding pathways)

Intent:

To optimize use of the highest point in the gardens by:

- Improving existing stairs.
- Providing an ADA accessible pathway.
- Enhancing the hilltop through interpretive signage, seating and wind protection.

**Physical
Description:**

Heidelberg Hill presents beautiful panoramic views of much of the northern portion of the garden. It also provides several opportunities for interpretation, not only because it looks down upon patterns of planting in the collections below (an unusual perspective for visitors), but also because of its historical significance as the site of a beer garden in the 1894 Mid-winter Fair.

The existing wooden steps should be replaced with permanent masonry steps and improved with handrails as appropriate for greater convenience and safety. To meet ADA standards, a path (480-feet long, 6-feet wide and not exceeding a 5% gradient) will spiral up to a paved overlook at the top of the hill. Here the same cobble-type paving and finished concrete squares (possibly with centered brass memorial plaques) found at the Main Entrance could be repeated.

A wind shelter could be built with a light frame and retractable fabric roof or arbor sections and vine screens as wind protection walls. The shelter should be modest in size and placed toward the southern end of the overlook. While it should be colorful and visible, it should not dominate the surrounding area. Materials and architectural forms should reflect the renovations to the CFB. Information panels could be built into the screen walls. In addition, there will be benches, a trash container, drinking fountains and low retaining walls made of handhewn stone blocks reminiscent of the monastery walls.

Since this could be considered a special attraction in the garden, provision of the spiraling path meeting ADA requirements will be essential. A more detailed survey of the site, including the location and elevation of trees and shrubs to be

saved, will be needed before the preparation of a more detailed program and design.

New Collections at Tetlow Fountain – Cost Opinion Item #15

(± 34,700 s.f.)

Intent:

To make improvements to the area surrounding the existing fountain which will

- Allow SABG to expand or add collections in this large area.
- Improve the visual attractiveness and liveliness of the main fountain area.
- Provide enough room if necessary for plants displaced by the World Conservation Gardens.

Physical

Description:

With the removal of several thousand square feet of concrete paving and lawn this area will lend itself to three different zones of collections or beds:

- 1) A central zone aligned on the axis between the fountain and the esplanade, between the CFB and Education Center to the west; this zone should be planted with low materials to avoid blocking this important vista.
- 2) A northern zone sloping gently upward and receiving more sun; this area is relatively protected.
- 3) A southern zone with a small hillock which could be accessed with a short path.

A meandering path of stabilized granular material, such as decomposed granite, will connect all three planting areas. Six benches clustered in two groups will provide seating adjacent to the elliptically shaped Main Lawn.

Site preparation (removal of existing pavement and regrading, installation of irrigation, etc.) could begin at an early stage. However, if plants are to be relocated here from the vicinity of the World Conservation Gardens (the construction of which may be further off in the future), it would be best to leave the existing lawn in place until the appropriate time.



Tetlow Fountain Renovation – Cost Opinion Item #16
(± 9,700 s.f. surrounding the fountain)

- Intent:** To maximize the attractiveness and prominence of the fountain through:
- Renovations to the existing circular concrete rim.
 - The addition of circumferential beds of annual color or special plant displays.

Physical Description: In addition to surrounding the circular fountain with over 1,000 s.f. of masonry pavers (matching those used in the Main Entry Plaza), the concrete rim of the fountain itself might be made more attractive with the addition of carefully selected stone or tile cladding. Improved underwater up-lighting will also add to the attractiveness, particularly during the early evenings of the winter months when the glow would be visible from the Esplanade and the Helen Crocker Russell Library. A bronze plaque dedicated to the memory of Professor Robert Tetlow, instructor at the University of California for over 30 years and designer of the 1959 SABG Master Plan, should be embedded in the rim of the fountain.

Circular beds of colorful plants will be divided by decomposed granite paving. Five benches would be provided, as well as identification and/or interpretive signage.

Rock Garden, Water Cascade and Overlook – Cost Opinion Item #17
(± 17,500 s.f.)

- Intent:** To take advantage of this McBean Pond overlook as a logical extension of the Tetlow Fountain by:
- Strengthening the view corridor between the Tetlow Fountain and the Friend Gate & Plaza.
 - Strengthening the visual link between the Zellerbach Arbor, the relocated Strybing Bench and Tetlow Fountain.



**Physical
Description:**

A 320-foot-long stream and cascade falling approximately 16-feet would be flanked by broad low walls of native coastal stone (chert, sandstone, greenstone etc.) and low-growing coastal plants. The waterway paralleling the path would provide multiple opportunities for display and identification of hydrophy (water-loving) plants.

At the leading edge of the overlook, approximately 110-feet of new retaining walls are proposed to replace the existing curving wall. The wall should extend adequately above pavement level to meet handrail requirements. The revised overlook will be paved with the concrete panel/cobble paving proposed elsewhere. It will be framed by four benches. An underground vault (accessible possibly through the face of the retaining wall) will enclose a new pump and fill equipment area.

This component would best be constructed in conjunction with renovations to the fountain and relocation of the Strybing Bench.

Strybing Bench & Pond – Cost Opinion Item #18
(± 3,400 s.f.)

Intent:

To highlight the granite bench dedicated to Helene Strybing by:

- Moving the bench to a more prominent and visible position.
- Enhancing the area around the bench with a pond and plantings related to surrounding collections.
- Providing an opportunity for interpretation of the history and evolution of the Gardens.

**Physical
Description:**

The massive Strybing Bench is approximately 14-feet long by 6-feet high and is an assembly of large pieces of granite. If it is structurally feasible to dismantle the bench, it could be relocated to a new concrete footing aligned between Zellerbach Arbor and the Tetlow Fountain and closer to the adjacent path shown.

A small pond, fed by the stream cascade, will provide an elegant foreground. The edge of the pond should combine plantings with masonry units or native stone paving, allowing enough hard surface or planting supported by concealed reinforcing (such as "grass-crete" units) to accommodate wheelchair access. A small bridge over the creek will be required. An identification sign adjacent to the path will explain the relevance of the bench and give a brief history of the Gardens' origins and development.

McBean Wildfowl Pond – Cost Opinion Item #19
(± 16,800 s.f.)

Intent:

To direct much-needed renovation of McBean Wildfowl Pond and its immediate surroundings that will include:

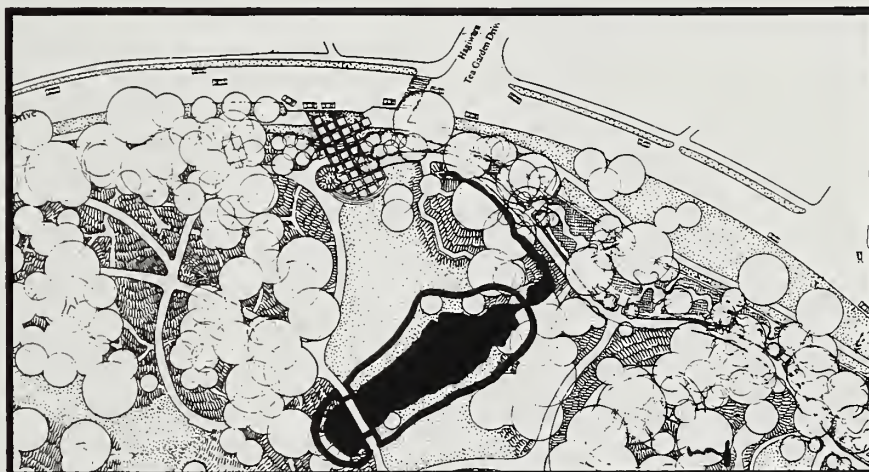
- Restoration of the pond's damaged edges.
- Upgrading of the pond's hydrologic system to a self-contained circulation system (including filters and pumps) for health, aesthetic and water conservation purposes.

- Control of foot traffic to avoid trampling of vegetation.

**Physical
Description:**

A pattern of pedestrian access is planned for this area. In conjunction with this, a system for vegetation reinforcement and armoring will be needed, as well as pathways directing pedestrians to the pond's edge without cutting across shrub or lawn areas. In addition, concealed porous units (such as "grass-crete") are needed to reinforce the surrounding turf. Native stone, generally associated with inland freshwater environments, will be used for armoring where necessary at the immediate edge of the pond.

Much of the investment in this area will be a concealed, closed water-circulation system. Water will come from the uphill end of the Primitive Garden stream and recirculate through a pump and filter system at the western end of McBean pond. A water jet (and concealed pump) is proposed for the main body of the pond to help clarify the water through aeration. This jet will also provide an important visual link between Friend Gate and the existing fountain and should be aligned directly between them. (See Chapter 4, "Garden-Wide Design Proposals.")



The renovation should include raising the bridge curb and other improvements as is necessary to comply with ADA requirements and current applicable safety standards. If the pond is deeper than 30-inches to the bottom, measured from the bridge walking surface, handrails or a submerged safety grid may be required.

Hydrophytic (water-loving) plants, such as tules, should be considered in the pond itself. Depending on density and placement, these could improve habitats for wildfowl by screening human movement on nearby pathways.

Friend Gate Renovation – Cost Opinion Item #20
(± 21,000 s.f.)

Intent:

To provide a plan for visual and functional enhancement of Friend Gate that will:

- Make it more visible from MLK, Jr., Drive and from the pedestrian crossing at Hagiwara Tea Garden Drive.

- Direct the first-time visitor toward the refurbished CFB (directly via the proposed Promenade and indirectly via the renovated Tetlow Fountain at a visual "knuckle" or turning point toward the CFB).
- Provide an opportunity to present the mission of SABG at a major entrance.
- Provide important visitor amenities, such as restrooms and drinking fountains, currently lacking in this area.

**Physical
Description:**



The plaza overlooking the Primitive Plant Garden, the McBean Wildfowl Pond and other vistas directly south is the most important element of this renovation. A decorative guardrail and steps at the plaza edge will allow visitors to sit and rest.

Revisions to the existing planted circle include relocation of the bench to face the plaza. Grades will be revised to provide an ADA accessible route to one side (northwest) of this circle and steps with handrail to the other. The orientation of the paving pattern introduces the visitor to the Promenade (and therefore to the World Conservation Gardens, etc.). The 9x9 paved squares with cobble-type dividers found at the Main Entry are repeated here.

A metal letter sign announcing the Strybing Arboretum and Botanical Garden (matching that at the Main Entry Plaza) will top the existing concrete columns. A signage column announcing current events with a combination of banners and removable fabric letters or information panels will be placed outside the gate for higher visibility from MLK, Jr., Drive. Signage (complying with ADA standards to meet the needs of the visually and hearing impaired) should also be provided here.

The wrought-iron fence will remain as is except for the possible relocation of the double gates and the addition of an after-hours ADA accessible turnstile gate.

Another important aspect of the renovation is the relocation of the pedestrian crossing to the sidewalk of Hagiwara Tea Garden. The current crossing (occurring west of the actual intersection) is unsafe. Curb renovations along MLK, Jr., Drive will include a bus and vehicular drop-off pocket as well as additional "blue curb" parking and curb-cut for disabled visitors. Movable information carts or displays could be placed both inside and outside the gate during daylight hours, creating an atmosphere similar to that of Main Gate (i.e., a distinct pedestrian "market" plaza). These can be stored in the nearby restroom (proposed).

Another component of this area is a new (\pm 65 s.f.) ADA accessible public restroom with room for equipment and tool storage. Drinking fountains, trash containers and benches will be provided.

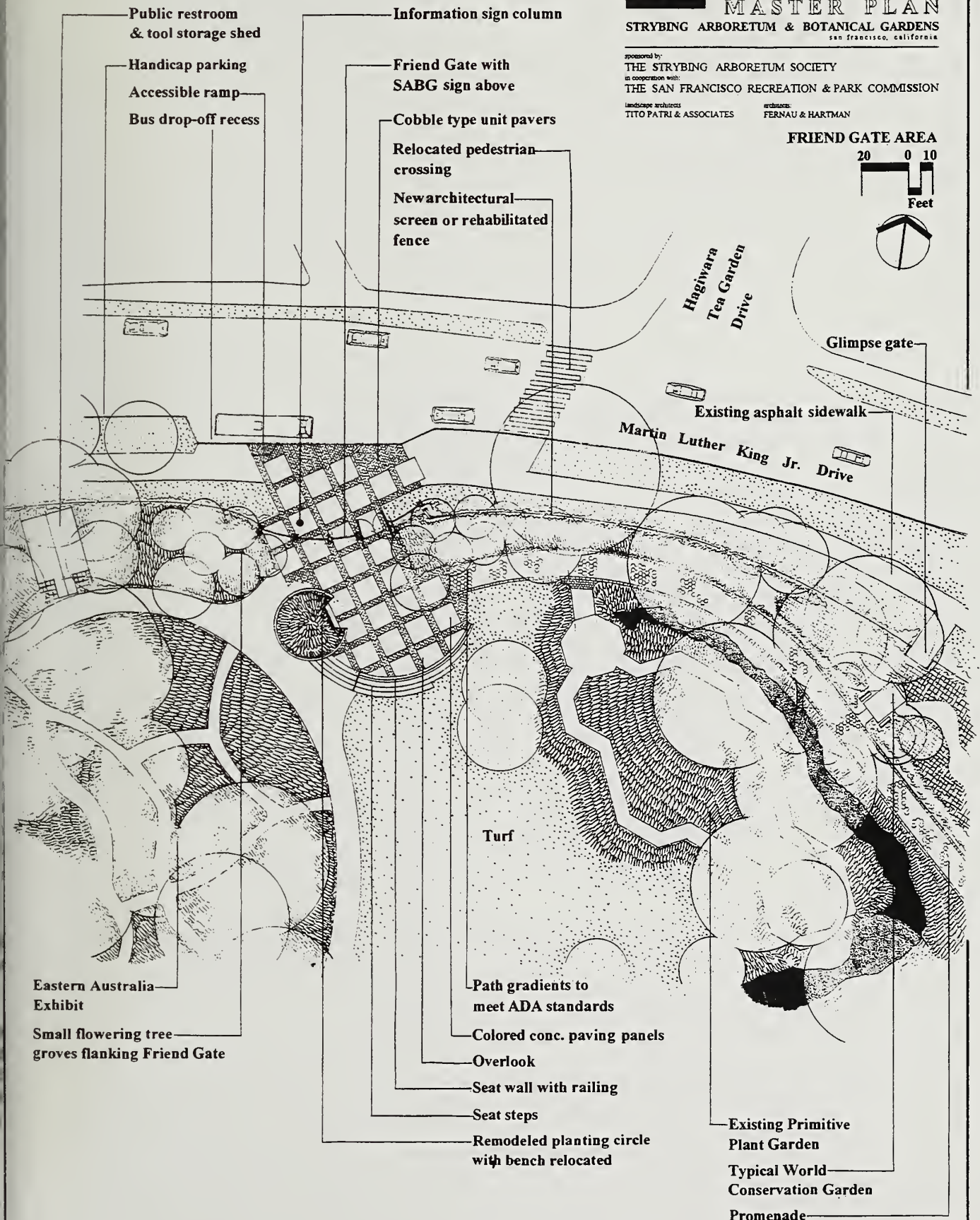
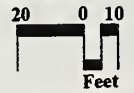
Since there may be greater visitation at this gate than at Main Gate, the renovation project should receive high priority. However, design cannot begin until a detailed survey of existing conditions -- topographic, utilities, trees to be saved, etc. -- is completed. Coordination with the Recreation and Parks Commission regarding curb cuts and relocation of the pedestrian crosswalk will obviously be necessary.



MASTER PLAN
STRYBING ARBORETUM & BOTANICAL GARDENS
san francisco, california

sponsored by
THE STRYBING ARBORETUM SOCIETY
in cooperation with:
THE SAN FRANCISCO RECREATION & PARK COMMISSION
landscape architects
TITO PATRI & ASSOCIATES
architects
FERNAU & HARTMAN

FRIEND GATE AREA



Public restroom
& tool storage shed

Handicap parking
Accessible ramp
Bus drop-off recess

Information sign column

Friend Gate with
SABG sign above

Cobble type unit pavers

Relocated pedestrian
crossing

New architectural
screen or rehabilitated
fence

Hagiwara
Tea Garden
Drive

Glimpse gate

Existing asphalt sidewalk

Martin Luther King Jr. Drive

Turf

Eastern Australia
Exhibit

Small flowering tree
groves flanking Friend Gate

Path gradients to
meet ADA standards

Colored conc. paving panels

Overlook

Seat wall with railing

Seat steps

Remodeled planting circle
with bench relocated

Existing Primitive
Plant Garden

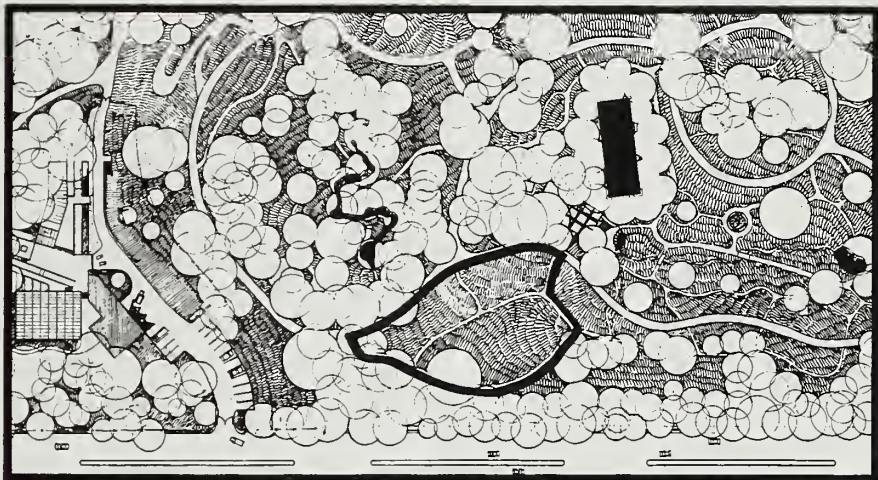
Typical World
Conservation Garden

Promenade

Arthur Menzies Garden of California Native Plants – Cost Opinion Item #21
(± 27,000 s.f.)

- Intent:** To make the best use of the coldest and lowest spot in the arboretum (which will be made available after the demolition of the existing nursery complex) by:
- Displaying California native plants accustomed to low temperature extremes (i.e. plants which need extreme cold to bring out their best leaf and color displays).

Physical Description: After removal of pavement, utilities, buildings and ancillary structures, an area of approximately 1/2-acre will be available. Because of its size, it can easily be divided into subsections responding to the different levels of exposure and shade found there. An informational sign should emphasize the area's unique reputation as the coldest spot in San Francisco.



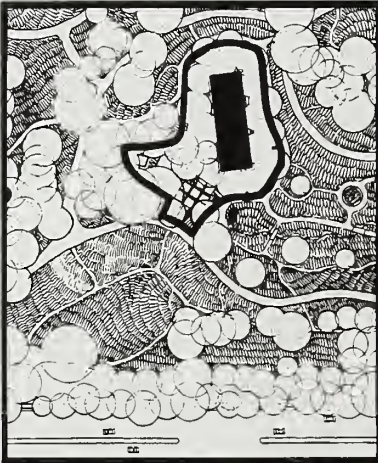
This project obviously cannot take place until construction of the relocated nursery complex and demolition of the existing complex. Surveying of ground conditions should not be done until the completion of demolition and removal of debris.

Water Resource Conservation Exhibit – Cost Opinion Item #22
(± 14,000 s.f. excluding existing concrete reservoir)

- Intent:** To optimize the historic well, pump house and reservoir as an interpretive exhibit illustrating:
- The water needs of temperate zone plants displayed in the Gardens.
 - The West's limited water resources and human consumption in the future.
 - The uniqueness of groundwater in an urbanized peninsula such as San Francisco.
 - The relative water needs of native plants in contrast to those of non-native and exotic plants.

- Drought tolerant planting.
- How reclaimed water can fit in the picture and what the future of such use is in San Francisco.

**Physical
Description:**



In addition to clearing and grubbing around the existing reservoir and pump house, new paving and pathways will be required to access the various components of the exhibit. Of great importance will be the renovation of the reservoir itself, at least in part for safety reasons. This will include a rigid rust proof screen submerged approximately 24" below high water level so that the existing security fence and gate could be removed and replaced with a 42" see through security rail. The submerged safety screen will have no effect on the total volumetric capacity of the reservoir. Views from selected locations along surrounding paths should be cut through existing vegetation.

The pump house could be remodeled to make the pumping mechanism (along with explanatory diagrams) visible to the public, but secure from vandalism. The concept of groundwater in San Francisco's unique geological formations should also be illustrated. A small seating area with drinking fountain and trash container will be included.

Since this is a somewhat unique exhibit, funding support might come from the San Francisco Public Utilities Commission or other organizations concerned with water resources and conservation.

SABG should seek support from Recreation and Parks to retain and convert the facilities for the reasons described here and as a back-up irrigation system which could well be needed in future drought years.

Redwood Trail Forest Exhibit – Cost Opinion Item #23

(± 3,360 s.f., with upgrades only in selected areas)

Intent:

To optimize this already attractive and secluded area and to:

- Create an exhibit which serves as a point of interest midway between the enlarged Arthur Menzies Garden of California Native Plants and the Succulent Garden.
- Make this feature ADA accessible.
- Improve its interpretive message.

**Physical
Description:**

Existing pathways will have to be upgraded with stabilized granular pavement or its equal. Pathways must satisfy ADA requirements with no gradients over 5%. Short bridge-like crossings over creeks will require adequate handrails or rail curbs.

Existing planting illustrating the creek type of Redwood ecosystem could be expanded to the west. Additional plantations of *Sequoia sempervirens* in that direction will reinforce screening from the relocated Nursery Complex. Illustrations of wildlife associated with such systems and the special geographic conditions of coastal creek Redwood forests will complement this theme. A bench, drinking fountain and trash container should be added to this area.

Malesian Rhododendron Exhibit -- Cost Opinion Item #24

(± 6,580 s.f.)

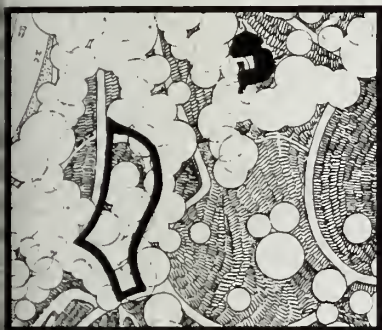
Intent:

To provide an exhibit and related pathways that will:

- Serve as a feature point midway between the Succulent Garden and the East Australia Collection.

Physical

Description:



This feature will occur at the juncture of a proposed new pathway connection between an internal Type B path and an external Type A connection (the main connection between Friend Gate and the California Coastal Range Habitat Exhibit or west end of the garden). It is currently a wild and unkempt area which needs to be simplified, refined and made more accessible. The existing switchback connections between the upper and lower levels of the Succulent Garden do not meet ADA standards, as they are too sharp and lack adequate landing space.

While many of the plants already exist, there will be room for more as reforestation and removal of old trees in the area makes more light available. Pathway edging treatments described elsewhere are appropriate for Types A and D pathways. Benches and directional and informational signs are needed.

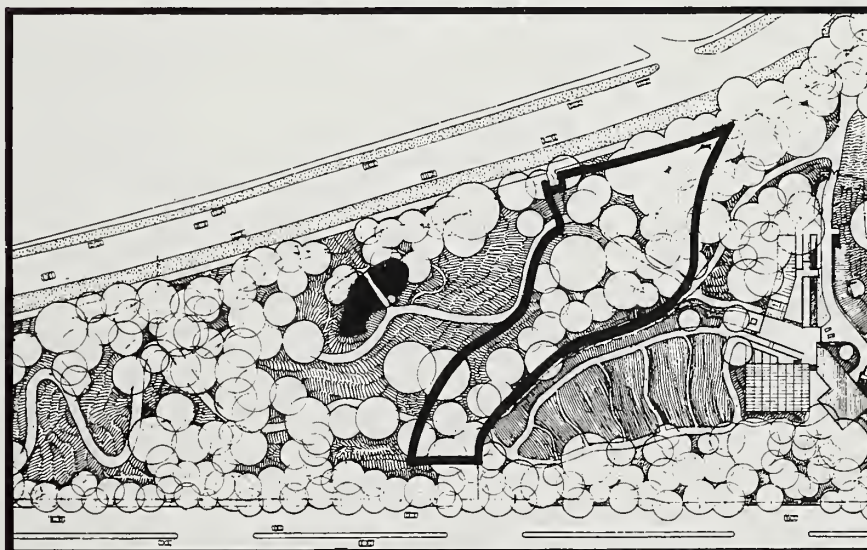
Mediterranean Arboretum -- Cost Opinion Item #26

(± 62,500 s.f.)

Intent:

To provide more space for trees not exclusively selected in association with a particular feature, climate or bio-region collection found within the Gardens. This will:

- Fulfill a need for long-term testing and research of the species and varieties suitable to the San Francisco climate.
- Provide a demonstration for visitors interested in planting trees in their own yards or gardens.
- Assist in the selection of appropriate trees for San Francisco's public parks and streets.



**Physical
Description:**

The site is a northwest-facing slope in the form of an elongated polygon with a vertical elevational difference of about 16-feet. Trees should be planted in row following the contours with narrow service paths at necessary intervals. The plantation of trees should also provide wind protection for the proposed Growin Grounds directly to the southeast. The arboretum is also located adjacent to the major east-west path connection to the west-end gate, and with appropriate signage can introduce the public to some of the research goals of SABG.

In relatively undeveloped areas, planting could begin in this area as soon as site preparation is completed. Plans should be made for an automated sprinkle system to be installed in connection with the arboretum.

California Coastal Range Habitat Exhibit – Cost Opinion Item #27

(± 4.97-acres divided into three sections)

Intent:

To provide a major new attraction at the west end of the Gardens that will:

- Take advantage of the accentuated topography and elongated shape of this portion of SABG.
- Educate the visitor regarding physiographic influences (slope steepness and orientation, exposure, geologic and soil type, etc.) on California plants.
- Illustrate the "bio-region" concept and how San Francisco and the Gardens site relate to the Coastal Edge Zone.
- Illustrate the reclamation and transformation of dunes into Golden Gate Park. This will make use of the sandy soils and bowl-shaped land form at the far western end of the exhibit.
- Use native plants in unusual situations, such as in a saline pond, bridge and deck with interpretive exhibit.

**Physical
Description:**

Because of steep topography in this area, a 12-foot-wide Type A pathway meeting ADA accessibility standards should be provided. The layout of gardens should make use of the unusual topography.

Because removal of some of the old pines and reforestation has already begun, the existing pine trees will continue to provide the essential landscape framework for some years to come. Some existing plants could be relocated in patterns relative to the specific educational goals mentioned above.

The three sections of the exhibit encompass generally consistent topographic conditions. These are as follows:

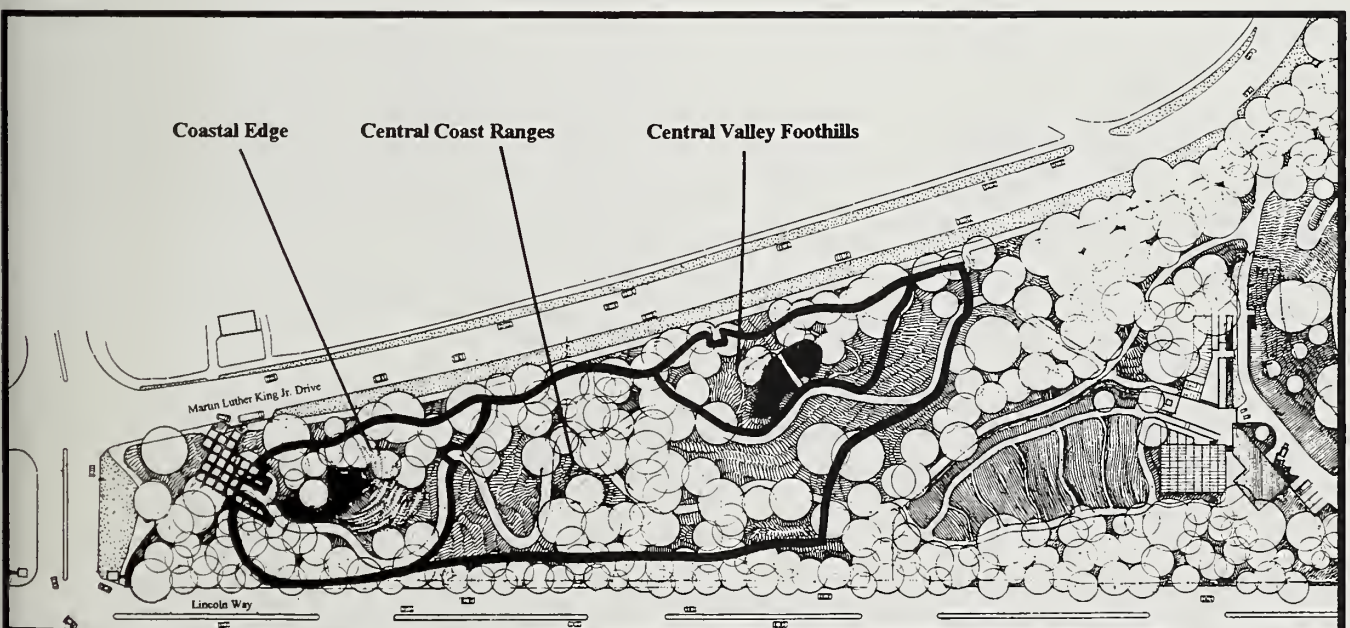
1. **Coastal Edge (± 40,300 s.f.):** This is a relatively less steep area with a sump or low spot within the old sand dunes and with no apparent drainage. It is well suited for a small pond, symbolic of coastal ponds and containing brackish water with appropriate plantings. Adjacent upslope will be an area, slightly under 1/4-acre, of sand dune exhibit illustrating the pioneering methods of stabilizing sand and initial reforestation which were used in the transformation of Golden Gate Park and the Gardens to a garden environment. The dune exhibit could illustrate the five phases of reclamation:

Phase 1: *Grading and compaction of otherwise migrating dunes;*

- Phase 2:** *Stabilization with dune grasses, Eucalyptus, pines, etc.; Evolution of microclimates;*
- Phase 3:** *Primitive irrigation from on-site wells and use of early reclaimed-water systems;*
- Phase 4:** *Addition of smaller ornamental trees and shrubs, perennials and annuals to create garden-like environments in the pockets of protection created by the first three phases;*
- Phase 5:** *The senescence and reforestation of the aging coniferous forest trees.*

Signage and benches located at the edge of the saline pond will be included.

2. **Central Coast Ranges ($\pm 144,800$ s.f.):** This exhibit will take advantage of an abrupt rise in topography, allowing installation of a meandering path (necessary to retain a low-gradient for ADA purposes in any case) which will bring visitors within easy viewing range of the major portions of this exhibit. The range of possible plants is wide since there are slopes facing north, south and northwest, as well as a relatively exposed ridge top. Plants needed to help stabilize the south-facing slope paralleling Lincoln Way should be selected from a native palette. Existing Australian and other exotic species should be replaced with California natives.
3. **Central Valley Foothills ($\pm 31,500$ s.f.):** This exhibit will be placed in a north-facing bowl and could be viewed from the MLK, Jr., Drive sidewalk through a "Glimpse Gate." Hydrophytic plants at the existing freshwater pond will be supplemented with appropriate native plants. Since this pocket is relatively protected and warm, it can support a sampling of plants found in the warmer valley foothills on the western edge of the Central Valley.



The entire exhibit will involve interpretive points and appropriate signage at the east and west edges approaching the exhibit and an expanded interpretive exhibit at the existing freshwater marshy pond and deck. Directional signage will also be important since access to the Central Valley foothills portion of the exhibit is off the main trail.

This major feature should not be built until completion of the West Gate. However, work on the steep eroding slopes paralleling Lincoln Way, including relocation and/or renewal of the security fence, should start as soon as possible. An important early step will be the preparation of an accurate survey of the area documenting topography, trees, shrubs and plant material to be saved, pathways structures and any existing utilities.

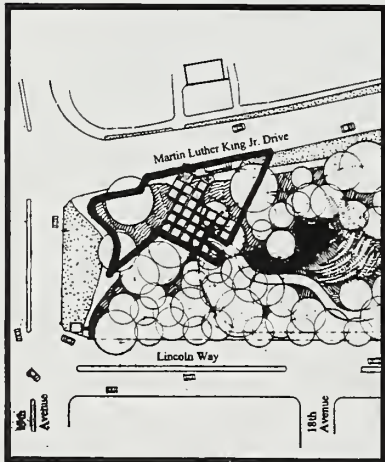
West Gate -- Cost Opinion Item #30 (± 3,675 s.f.)

Intent:

To provide a prominent entrance at the west end of SABG which will:

- Be consistent with Main and Friend Gates.
- Attract visitation at a corner of the Gardens which is presently isolated and receives very little public visitation.
- Increase the Gardens' "profile" through higher visibility at the intersection of 19th Avenue and MLK, Jr., Drive.
- Defer to the surrounding character of Golden Gate Park in keeping with the guidelines of the Golden Gate Park Master Plan, 1995.

Physical Description:



This gate will repeat the curved wrought-iron architectural screen (topped with outline metal letters announcing the Strybing Arboretum and Botanical Gardens as proposed at Main and Friend Gates). Regularly spaced vine panels, supporting the curving screen and sign and matching those proposed for the Main Gate, are proposed. A sign column with removable fabric letters on fabric panels will stand just outside the gate. Banners (in lockable, flush-mounted sleeves), directional signage and placen-type Garden and Park maps will be included.

The paving pattern used at Main and Friend Gates will be repeated and supplemented with a drinking fountain, benches, trash container and a public telephone. As with the other gateways, appropriate ADA related signage will be provided especially for sight and hearing impaired persons. Since the gateway is set approximately 140-feet from the west curb of 19th Avenue and is directly opposite public restrooms to the north side of MLK, Jr., Drive, it may be appropriate to establish a well-marked and striped pedestrian crossing at that point. Gate openings will be a sufficient width for service vehicles and there will be a turnstile-type after-hours exit gate.

A large, dense mass of *Griselinia*, a tall evergreen shrub, should be trimmed as a first step to provide visibility into the existing attractive and informal grove of pines. Detailed surveys of this area are needed.



Garden-Wide Design Proposals

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CHAPTER 4

GARDEN-WIDE DESIGN PROPOSALS

The Strybing Arboretum and Botanical Gardens consists of over 75-acres of complex gardens surrounded by highly varied park and urban environments. Even though many of the individual gardens are beautiful, the very size of the Gardens, together with inconsistent pathway pavings and borders, signage, fencing and furnishings, results in a lack of cohesiveness. Comprehensive and related networks of readily visible and “readable” elements and open spaces are needed to insure visual and stylistic continuity. At the same time, such elements must retain a certain uniqueness since they in total provide a sense of the Gardens as a special place within Golden Gate Park. In keeping with the overall goals of the Master Plan, these designed and managed elements (whether hard- or softscape) should, as much as possible, reflect:

- *simplicity;*
- *durability;*
- *timelessness;*
- *communication of meaningful and relevant concepts and information.*

Six existing networks were identified in the planning process as needing clarification, protection and/or improvement to meet these goals:

1. Open spaces (large and small), axial and other vistas;
2. Pathways and borders (edges, curbs, walls);
3. Signage and banners;
4. Perimeter fencing and walls;
5. Landscape furnishings and lighting;
6. Special features.

The primary improvements to these networks are located on the fold-out maps which follow.

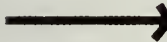
LEGEND



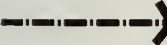
Screen planting



"Glimpse" features in perimeter fence



New axial view



Existing axial view reinforced



Existing feature

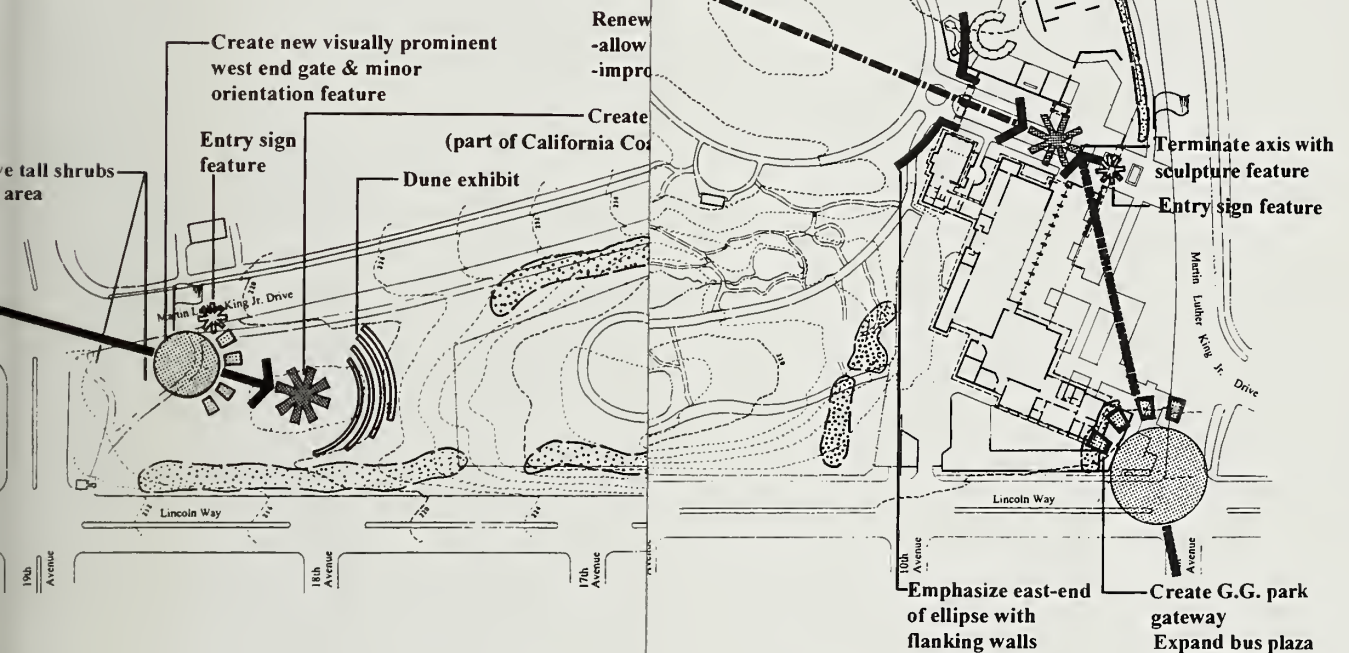
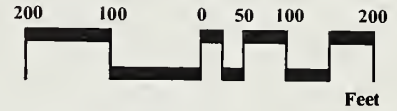


New feature



Banners

PROPOSED NETWORK IMPROVEMENTS




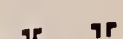




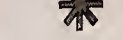
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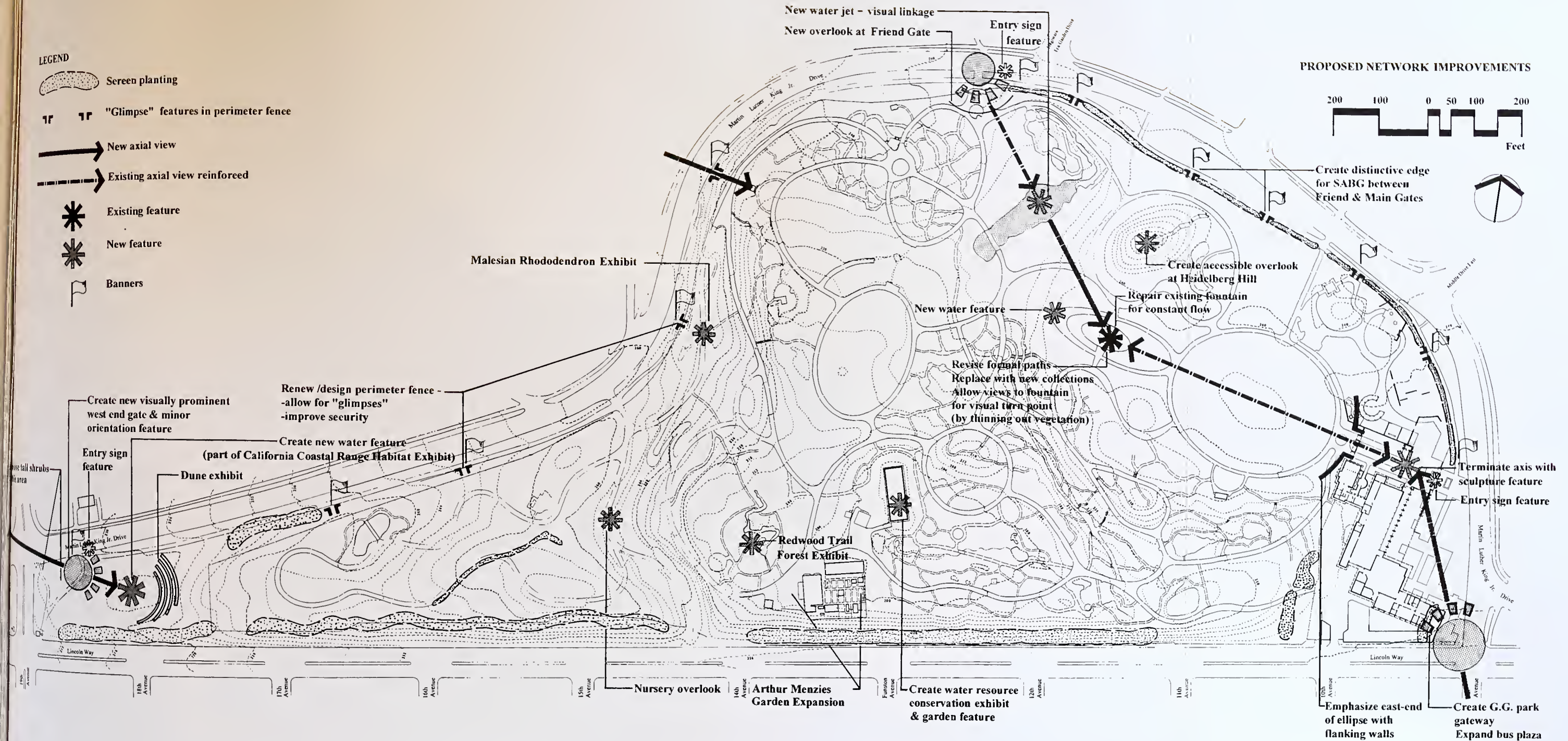
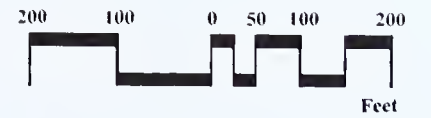
landscape architects:
TITO PATRI & ASSOCIATES

architects:
FERNAU & HARTMAN

LEGEND

-  Screen planting
-  "Glimpse" features in perimeter fence
-  New axial view
-  Existing axial view reinforced
-  Existing feature
-  New feature
-  Banners

PROPOSED NETWORK IMPROVEMENTS



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Vistas & Screen Planting

The main open space of the Tetlow Ellipse and Fountain provides essential axial vistas linking the Main Gate and the Esplanade with the Zellerbach arbor. These, along with the existing vistas and views indicated on the accompanying map, should remain as they are found today. New vistas are also possible. A new and important axial view will be created from Friend Gate, across McBean Pond (using the proposed water jet as a visual linkage) to the existing fountain. Here, existing trees will have to be trimmed for a clear view. A second is the view from the proposed Bus Stop Plaza at the corner of Lincoln Way and 9th Avenue toward the Main Entry Plaza. A third vista will be created at West Gate by the removal of existing vegetation, making the gate visible from the intersection of 19th and MLK, Jr., Drive. Finally a vista could, along with a glimpse gate, be provided to the Zellerbach arbor from the pedestrian path on the south edge of MLK, Jr., Drive.

Preservation and enhancement of spatial character is critical to maintaining orientation and an attractive visual experience. Much of the striking character of the Gardens is derived from the large outdoor "rooms" formed by the various "walls" of tall shrubs and trees and in the views and vistas made possible across and through these "rooms."

Issues:

The *Existing Vistas, Views and Secluded Sites Map* identifies approximately 26 areas within the Gardens which, because of unique characteristics (such as the land form, shrubs and tree canopies which form them), are recognized as small but attractive, secluded sites. They are of a scale which is smaller than that found throughout most of Golden Gate Park and provide a striking contrast to the activity and the architecture of the nearby urban neighborhoods. Significant concern for protection and preservation of these sites was expressed by the volunteers and the public.

Eight criteria were used in defining the attractiveness of secluded sites (note map legend). In general, the more defined the "walls" and "ceiling" of the site, the more attractive the site. The presence of water or a particularly attractive feature, such as a stone wall or particularly beautiful specimen tree, only added to the attractiveness. Since distance to a major path and off-site factors, such as road noise, are involved, most of these areas can only be improved through addition or changes to vegetation type.

In general, the primary goal of the Master Plan is the protection of these spaces and vistas over the long term. Landscape is in reality a process and, unlike fixed, rigid, elements (such as architecture), requires constant management. With respect to the removal of existing trees and shrubs and their replacement by new ones, the actions of gardeners, docents, volunteers and administrative staff need to be guided constantly by this map. Guidelines to achieve this goal include:

- 1) Maintain basic spatial quality while working with changing elements such as growing (and dying) trees and shrubs.
- 2) Consider the spatial impacts of reforestation in areas of removal of old forest trees. Approximately 60 of these trees are estimated to be nearing the end of their lives and would be removed in the next two decades.
- 3) Protect secluded sites without drawing too much traffic to them.
- 4) Conduct periodic workshops to introduce and familiarize administrative staff, professional gardeners and volunteers with the goals regarding the preservation/enhancement of the framework of open spaces, secluded sites and vistas.



LEGEND



Vistas & Views



"Secluded" sites



Major axis



Shrub masses



Open spaces



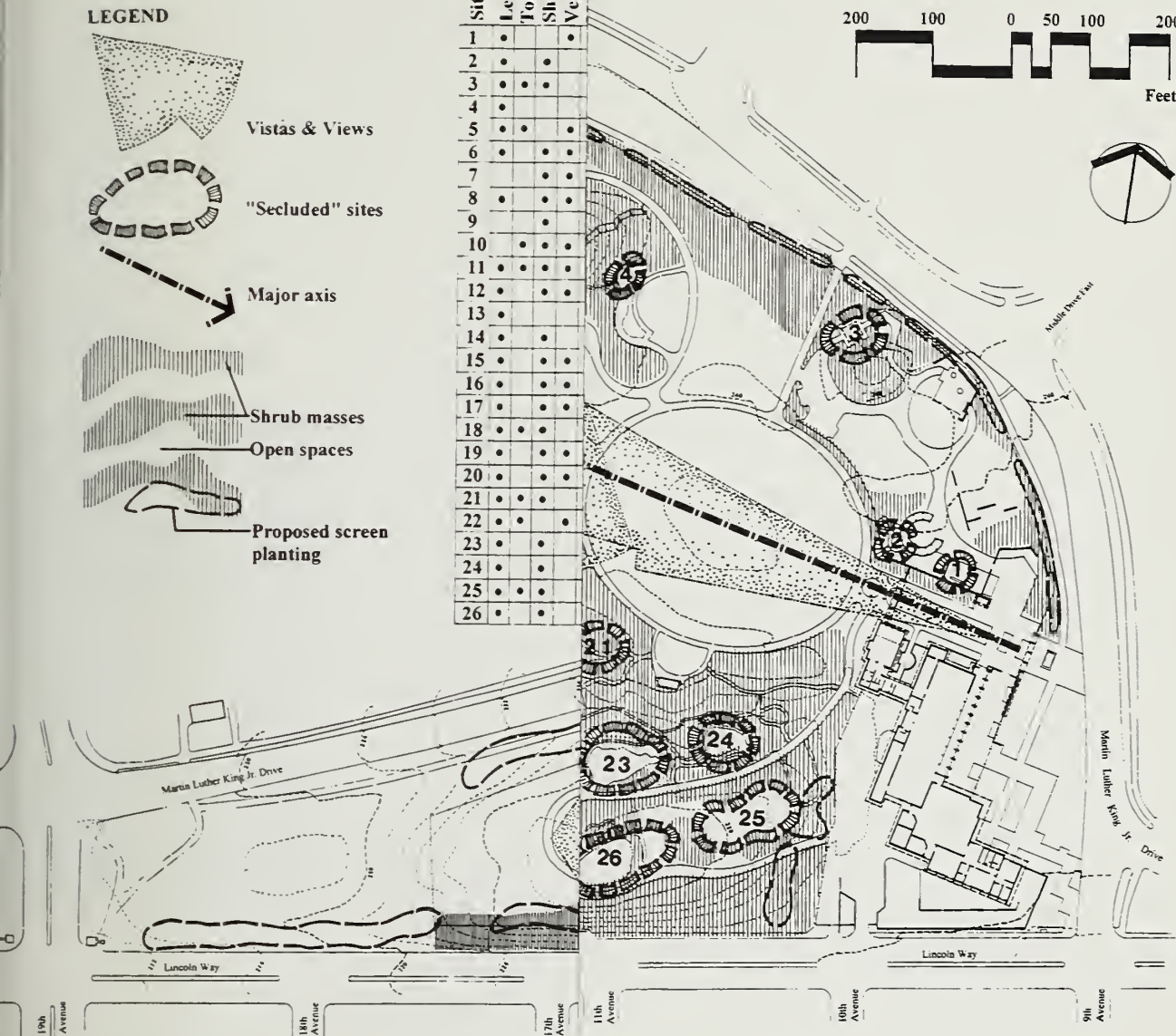
Proposed screen planting

Site #	Level floor	Topographic separat	Shrub wall	Vegetative canopy
1	•	•	•	•
2	•	•	•	•
3	•	•	•	•
4	•	•	•	•
5	•	•	•	•
6	•	•	•	•
7	•	•	•	•
8	•	•	•	•
9	•	•	•	•
10	•	•	•	•
11	•	•	•	•
12	•	•	•	•
13	•	•	•	•
14	•	•	•	•
15	•	•	•	•
16	•	•	•	•
17	•	•	•	•
18	•	•	•	•
19	•	•	•	•
20	•	•	•	•
21	•	•	•	•
22	•	•	•	•
23	•	•	•	•
24	•	•	•	•
25	•	•	•	•
26	•	•	•	•

EXISTING VISTAS, VIEWS & SECLUDED SITES



Feet



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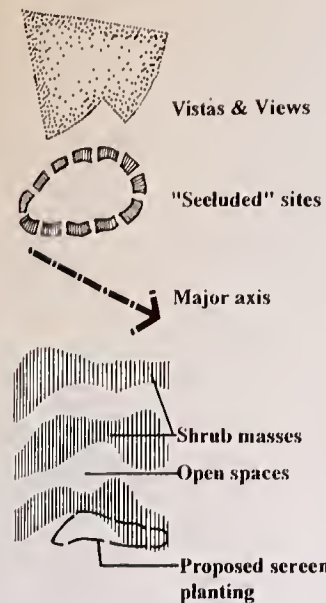
landscape architects:

TITO PATRI & ASSOCIATES

architects:

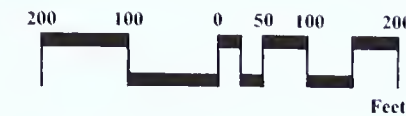
FERNAU & HARTMAN

LEGEND



Site #	Level floor	Topographic separat	Shrub wall	Vegetative canopy	Mature tree wall	Low/ml road noise	Off major path	Water	Total points
1	•								2
2	•								3
3	•								5
4	•								4
5	•								5
6	•								5
7									3
8	•								5
9									2
10	•								6
11	•								7
12	•								5
13	•								2
14	•								3
15	•								6
16	•								5
17	•								5
18	•								4
19	•								5
20	•								6
21	•								5
22	•								5
23	•								5
24	•								5
25	•								5
26	•								4

EXISTING VISTAS, VIEWS & SECLUDED SITES



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- 5) Continue the detailed examination of ± 60 old forest trees which may have to be removed in the next 15 years. Reforestation should continue apace so that replacement trees are already well established by the time the older trees are removed. This will also insure that new trees reinforce the existing views, vistas and major axes.
- 6) Improve approximately six lower-scoring secluded sites (after careful study) with additional planting. These are suggested on the map as scoring 3 or lower.
- 7) Monitor the forest conditions defining major axial views. New opportunities should be sought, particularly as old trees come down and new vista sites can be created or improved, such as from the top of Heidelberg Hill or the overlook at the New Nursery Complex. New views which present themselves (whether or not they are axial in character) should be identified, evaluated and marked on these maps for development and protection if appropriate.

Pedestrian Pathways

A primary purpose of this component is to establish a clear hierarchy of pedestrian pathways. While this must be reinforced with signage and map information available at the major entry gates, recognizable path hierarchy is one of the most important means of providing the visitor with a sense of orientation. For those who are not familiar with the grounds, path hierarchy (associated with a map of the Gardens) will allow them to better plan how far they want to go, how much time they want to spend and what they want to see.

It should be remembered that the Gardens are a walker's paradise. Moving at an average pace of 215-feet per minute, it would be possible to spend close to 3/4 of an hour walking (without stopping to examine collections) from the CFB all the way to the west end of the gardens along currently aligned pathways, a distance of almost 9,160 l.f. or 1 3/4 miles. At the same pace, along the proposed promenade between Friend Gate and Main Gate, a distance of 1,480 feet, a walker could accomplish this in seven minutes. In this case, the visitor with only enough time for an introduction to the Gardens and their mission would be satisfied and informed.


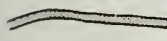






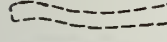
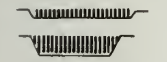

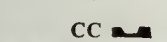

There are at least 8 potential loop routes based on attractions (the collections, special features, interpretive exhibits, etc.) which could be identified in terms of length and walking time and presented (in signage form) at the gateway entrance to SABG. Some visitors, particularly those with physical disabilities, might find this very useful.

One of the primary reasons for a hierarchical pathway system and Promenade is providing convenient, obvious access to the most attractive features -- both existing and planned. At present, there is no clear hierarchy and, in many cases, the pathways do not meet ADA standards -- that is, pathway gradients should not exceed 5%, and where they do, they must be built with specified curbs and handrails. This issue is discussed further in Chapter 5.

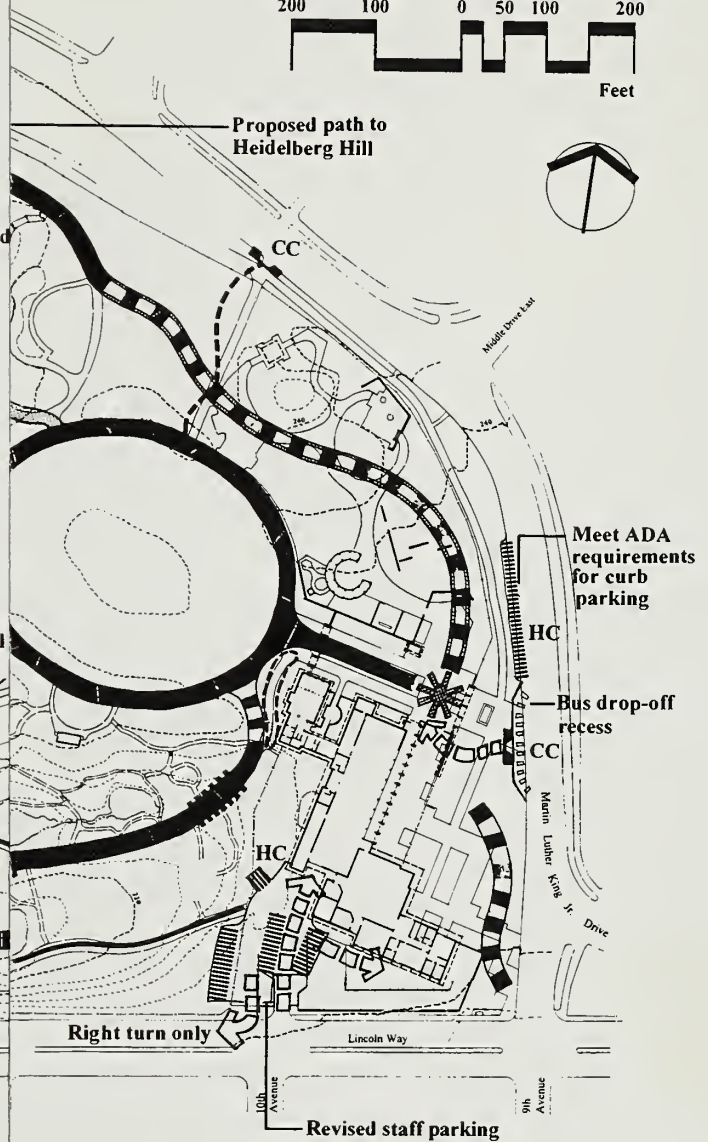
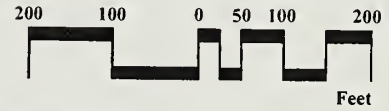
To accomplish this hierarchy, the physical design of the pathways should be improved. In some cases, existing pathways will be downgraded or even eliminated. In a few critical locations, new or rerouted pathways are proposed.

Issues:

LEGEND

-  Path type A
-  Path type B
-  Path type C
-  Proposed path type A - Promenade
-  Proposed path type A
-  Proposed path type B
-  Proposed path type C
-  Path size/material to be reduced/downgraded
-  Path to be removed
-  Potential parking
-  HC Proposed Handicap parking
-  CC Proposed Curb cut
-  ADA compliance segments

CIRCULATION & PARKING




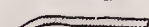







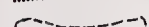
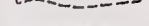

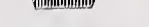
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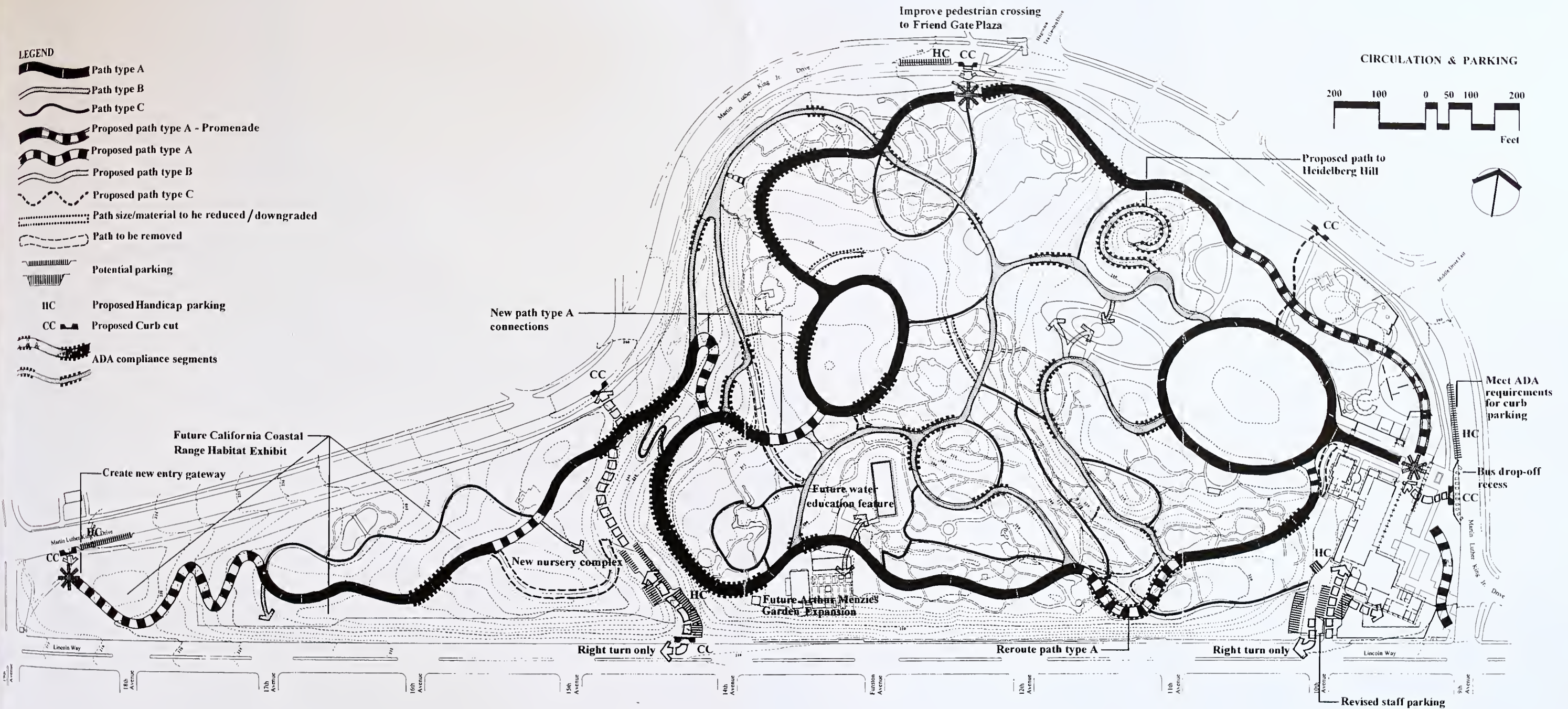
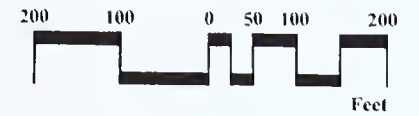
landscape architects:
TITO PATRI & ASSOCIATES

architects:
FERNAU & HARTMAN

LEGEND

-  Path type A
-  Path type B
-  Path type C
-  Proposed path type A - Promenade
-  Proposed path type A
-  Proposed path type B
-  Proposed path type C
-  Path size/material to be reduced/downgraded
-  Path to be removed
-  Potential parking
-  Proposed Handicap parking
-  Proposed Curb cut
-  ADA compliance segments

CIRCULATION & PARKING



MASTER PLAN STRYBING ARBORETUM & BOTANICAL GARDENS SAN FRANCISCO, CALIFORNIA

sponsored by:
THE STRYBING ARBORETUM SOCIETY
in cooperation with:
THE SAN FRANCISCO RECREATION & PARK COMMISSION
landscape architects:
TITO PATRI & ASSOCIATES
architects:
FERNAU & HARTMAN

- Intent:**
- To provide pathways sufficient to:
- Improve internal circulation for visitors and staff.
 - Accommodate ADA standards in selected locations.
 - Connect Garden elements with a recognizable hierarchical path system.
 - Upgrade the existing asphalt pathways with edge treatments in conformance with pathway designs throughout the Gardens.
 - Replace the many kinds of current ad hoc pathway-edge treatments with consistent design treatments.
 - Downgrade some pathways to smaller, narrower, stabilized, compacted granular paved routes.
 - Stabilize upslope or downslope edges with consistent design treatment and design materials.

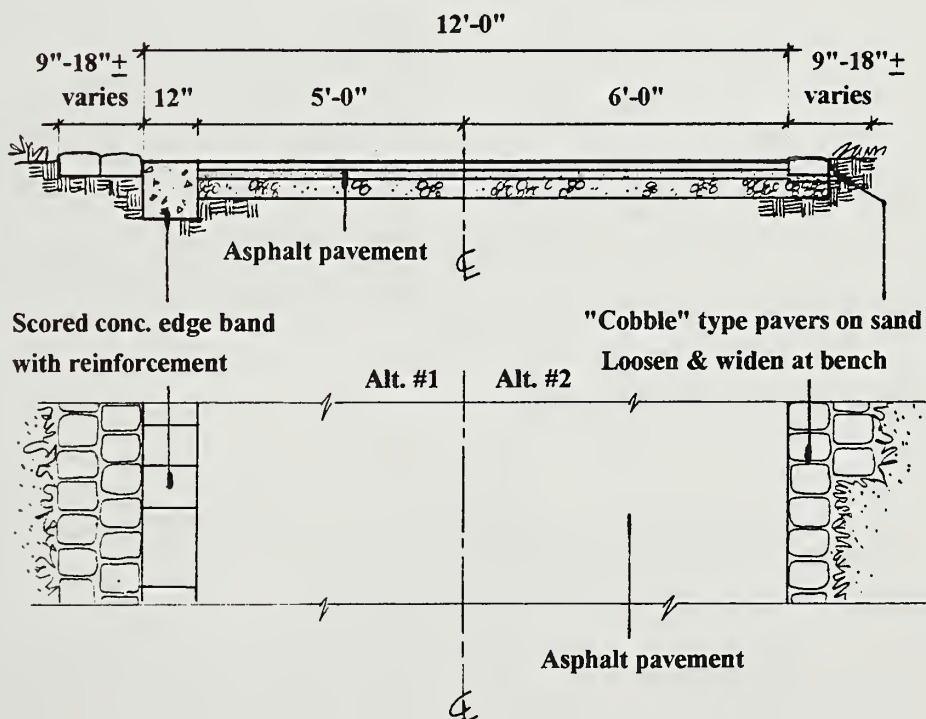
Path Type A: New Construction – Cost Opinion Item #33
(800 l.f.)

**Physical
Description:**

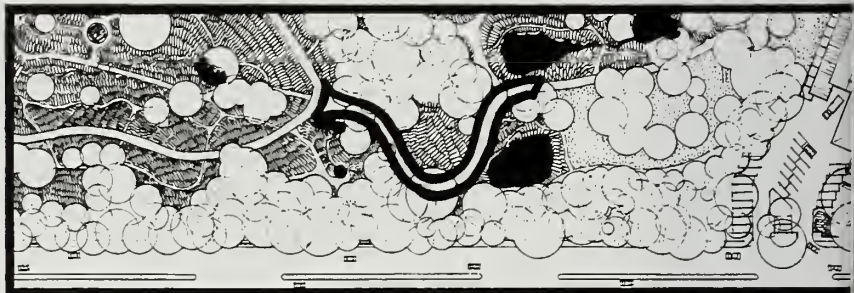
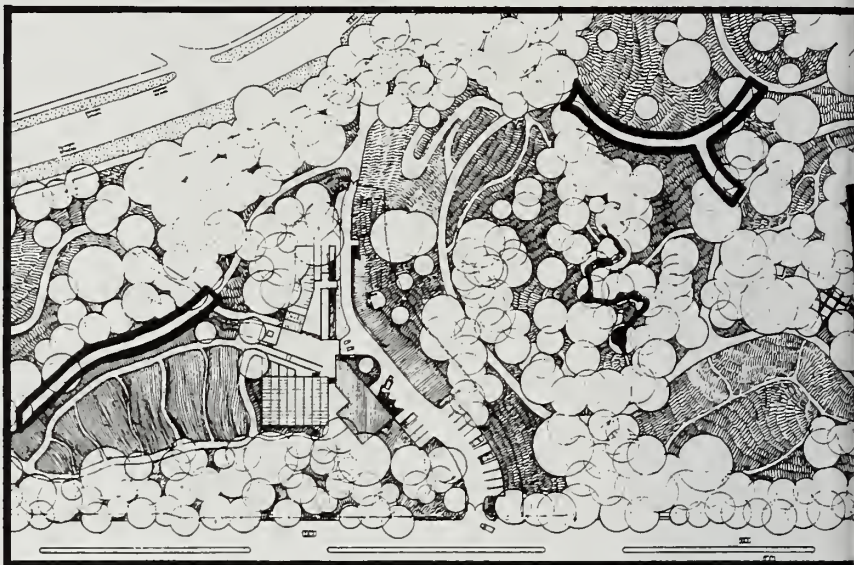
Three Type A new pathways need to be built:

- 1) a 340-foot-long path south of the Takamine Pond (to be rerouted);
- 2) a 260-foot segment north of the Redwood Trail as an east-west path connecting to a minor ellipse area;
- 3) a 200-foot segment along the ridge north of the proposed nursery growing grounds.

Path A - Main path – ADA accessible
– Primary site route - "The Amble"



Path Type A is 12-feet wide in order to accommodate service and emergency vehicles. Alternative 1 is a more expensive 12-inch-wide scored concrete backed by cobble-type pavers where required. The less expensive version Alternative 2, makes use of a cobble-type paver band over concrete reinforcement. In either case, the infill material is asphaltic concrete over a compacted aggregate base capable of withstanding the anticipated traffic over prolonged periods of time and as specified by a qualified soils or structural engineer.



Upgraded Path Type A – Cost Opinion Item #34 (± 5,360 l.f.)

Physical Description:

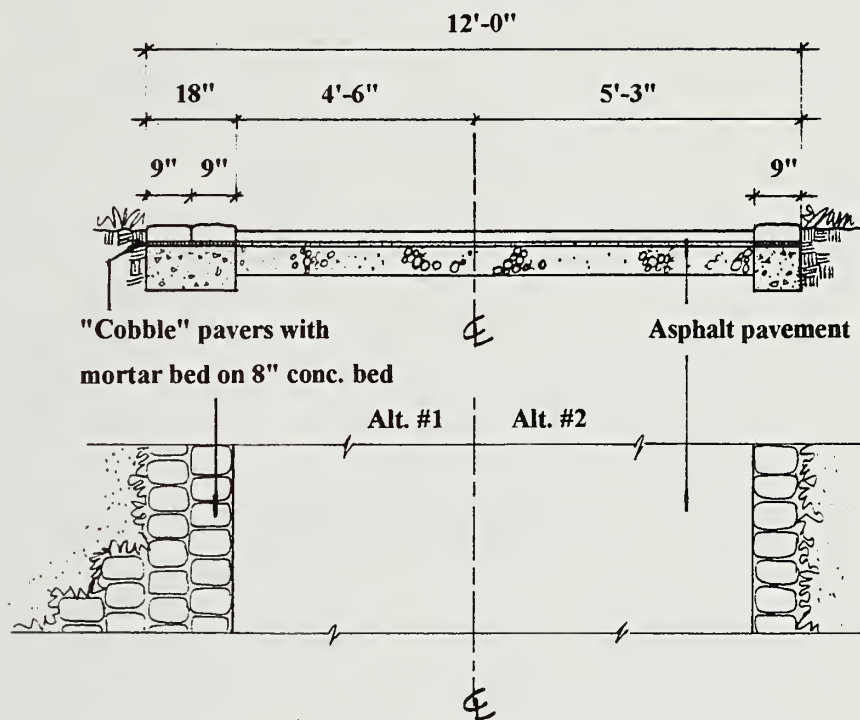
The physical characteristics are the same as those described above for Path Type A with the possibility of a more elaborate edging (such as Alternative 1) or a simpler, less expensive treatment (Alternative 2).

Path Type B: New or Rerouted Paths -- Cost Opinion Item #35
 + 80 l.f.)

Path B -- Preferred maintenance vehicular route

-- Not ADA accessible throughout

-- Secondary pedestrian through route



**Physical
Description:**

While still 12-feet in width to accommodate service vehicles, the apparent width of this path would be 10'-6". The more expensive Alternative 1 would place two rows of cobble-type edgers and mortar over a concealed reinforced concrete footing, and the less expensive Alternative 2 would cut this to a single row.

Upgraded Path Types B – Cost Opinion Item #36

(± 4,360 l.f.)

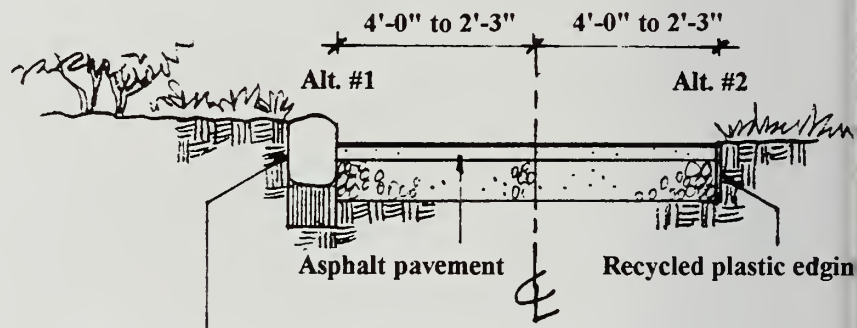
Physical Description:

As in the case of new Type B pathways, the appearance of this pathway is reduced to 10'-6" even though it can support service vehicles on a reinforced 12-foot-wide bed with a more expensive double row of cobble-type pavers (Alternative 1) or a less costly single row (Alternative 2).

Path Type C

Path C – Pedestrian only

- Short, internal (not through route)
- Not ADA accessible



Physical Description:

The path width in this category should remain constant for each segment connecting two junctions. The minimum width should be used wherever possible, but in some route locations, such as that connecting the service yard (near the Thomas Church Pavilion) to the main lawn ellipse and the link between Fried Gate and McBean Pond, the path will be wider than 4'-6". The full width (8'-0") needed to accommodate pedestrian concentrations and service vehicles will be accomplished by installing two-foot-wide rows of concealed "turf block" or similar lawn reinforcement materials on each side of the asphalt paving. The cobble edging would not be needed in this case.

Removal of Existing Pathways – Cost Opinion Item #37

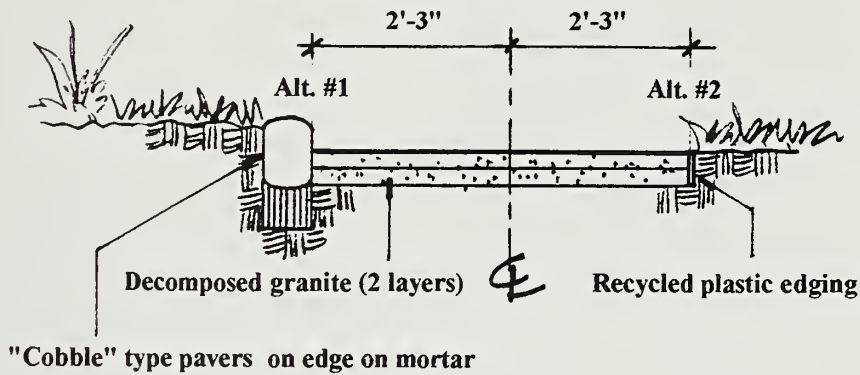
(± 10,600 s.f.)

Physical Description:

Some of the segments designated for removal occur on the John Muir Trail on north-south routes north of the Redwood Grove and on an east-west path south of the Takamine Pond. Removal of these pathways, averaging ten feet in width, will open up opportunities for additional planting for collection expansion.

Downgrading of Paths to Type D – Cost Opinion Item #38
(± 3,920 s.f.)

- Path D – Pedestrian only**
- Short, internal (not through route)
 - Not ADA accessible



**Physical
Description:**

These relatively short and narrow pedestrian pathways sometimes lead the visitor to the interior of some of the larger collections. Relatively steep slopes limit their width and result in unavoidably steep gradients. Thus, they are not intended to be ADA accessible routes and should not be the only access to major attractions. Service vehicles may not be able to negotiate these pathways. Where they are the only route to an informational (interpretive) sign (or cluster) at the interior of a large collection (such as the New World Cloud Forest) duplicate signage or displays should be provided adjacent to wheelchair (and otherwise) accessible pathways.

These paths are currently "paved" with a variety of materials (sand, asphalt, decomposed granite, bedrock, chips, etc.) and edged with different leftover cobbles, logs, branch trimmings, etc. In spite of their narrowness they are a major contributor to the occasional untidiness and lack of visual cohesion which spoils many collections. Several existing paths as indicated on the Circulation & Parking Map, should, for reasons of circulation hierarchy, be downgraded to Type D and existing asphalt paving replaced (between new edgings) with compacted, stabilized granular type paving. The construction standard shown in the cross section should apply to any such new pathways and those associated with planned collections or subsections of gardens.

Retaining Walls

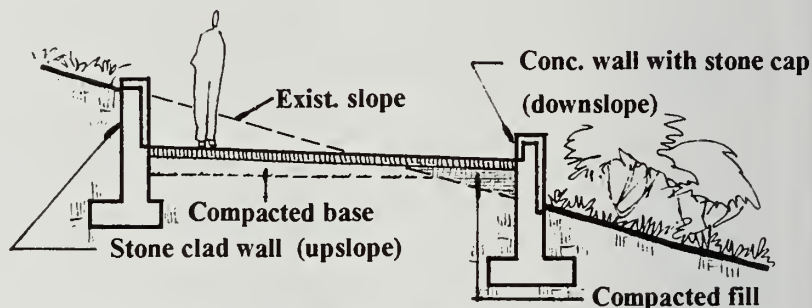
**Physical
Description:**

Throughout the Gardens, pathways must negotiate topography which is often steep enough to require retaining walls at one or both edges. This is of course important as both existing and new pathways will need to be widened to 12-feet to allow for service vehicle use. If sufficient materials and funds are available, these walls should be built with the monastery stone already used for beautiful walls

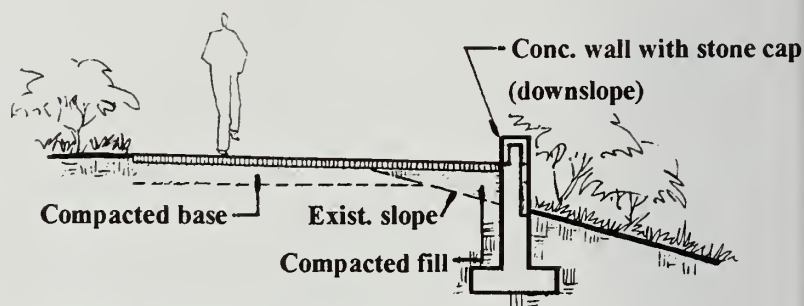


throughout the Gardens. If such resources are not available, reinforced concrete or concrete masonry unit walls faced with the same type of limestone would be less costly. The facing need only cover the exposed faces of the wall as shown in the following diagram.

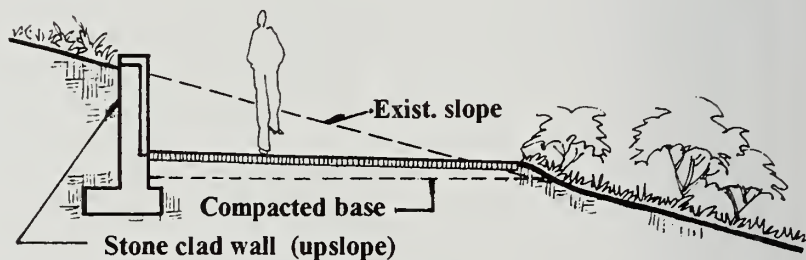
Because of the lack of detailed topographic mapping and the generality of master planning, it was not possible to identify where pathway retaining walls were needed. The cost of such walls, therefore, is not included in the cost opinions.



Typical Upslope/Downslope Retaining Walls



Typical Downslope Retaining Walls



Typical Upslope Retaining Walls

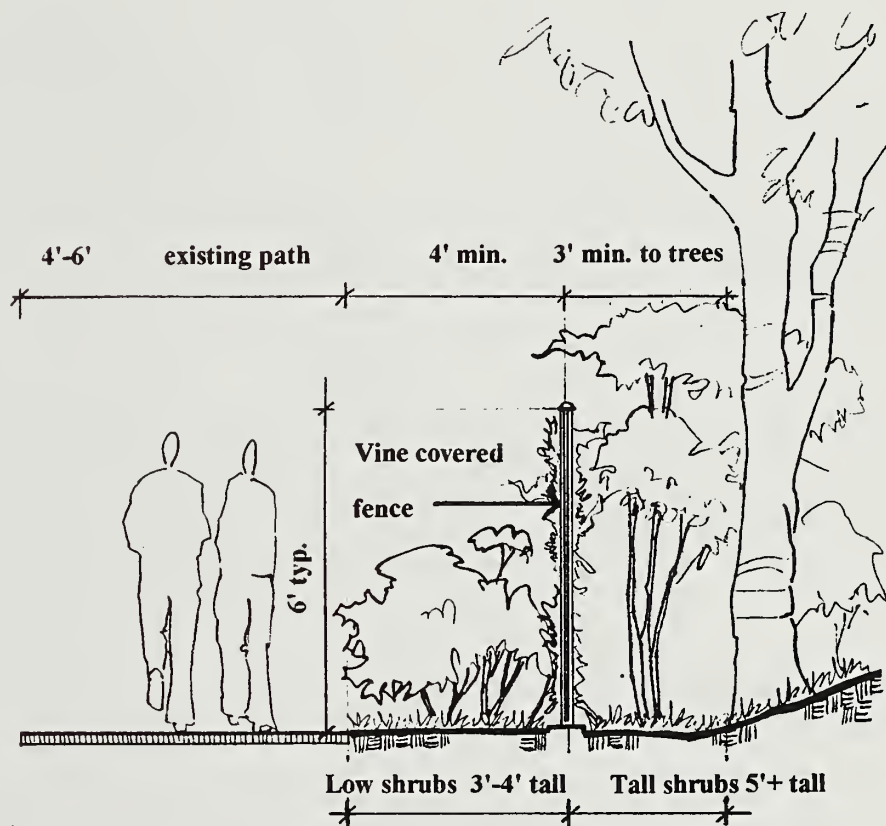
Perimeter Fencing – Cost Opinion Item #39

Chain link fence (\pm 5,055 l.f.); Designed fence (\pm 2,010 l.f.); Solid wood or CMU wall (\pm 170 l.f.)

Intent:

To upgrade SABG's fencing and walls in order to:

- Improve overall visual quality.
- Raise the level of security.
- Provide visual screening and sound mitigation.



Typical Perimeter Security Fence

Physical Description:

The existing perimeter chain link fence has deteriorated or has been breached at various locations especially where it is hidden. Aside from designed fencing and walls, the ultimate objective of the Master Plan should be the replacement and relocation of the existing security fence with a 6-foot-tall black vinyl-clad

chain link fence screened with vines and shrub planting wherever necessary. The black vinyl will help the fencing blend into most landscape settings.

The designed architectural fence extends from Friend Gate to the Main Gate and flanks the proposed new West Gate. This will serve as an important visual element linking the Friend and Main Gates. It should be made of simple rigid wrought-iron vertical picket, rigid, welded wire mesh or perforated metal panel with a weatherproof finish such as galvanizing, Korten or baked powder enamels and 8-feet in height. The design and color should be consistent throughout the Gardens in accordance with the Fencing and Gates Map. As a lower cost alternative, Glimpse Gates (see next item) could be flanked with short sections of the architectural fence and the remaining portions could be replaced with black vinyl-clad chain link fencing.

The existing open wood fencing adjacent to the south terraces near the rental wing of CFB provides too little in the way of sound protection. Alternative possibilities include the addition of wood members to close up all (vertical and horizontal) gaps -- the option estimated in the cost opinion. A preferable solution may be the replacement of the fence with a solid concrete masonry unit wall of greater height (up to but not exceeding 8-feet) which could be given a colored stucco coat to match nearby walls of the CFB. This will provide much better sound protection and will encourage greater use of the South Terrace.

Planting adjacent to chain link or architecturally designed fencing should include the use of creeping vines, particularly for the long segments of chain link fencing so that these become "semi-permeable green walls" that blend with the surrounding vegetation. The planting to the front and back of these fences should reflect the design needs of the particular locations in which they occur. For example, planting inside the fence designed for screening should fit with the particular collection which the fence parallels. By contrast, the planting on the outside of the fence could be selected with the presentation of a relative consistent plant material treatment along the MLK, Jr., Drive perimeter of the Gardens. Alternatively, a variety of vines could be planted, each type identified for the benefit of interested visitors and passersby.

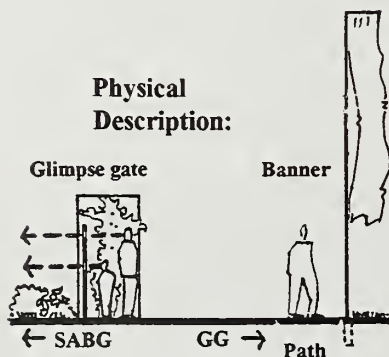
Glimpse Gates -- Cost Opinion Item #29 (7 "gates" spaced along MLK, Jr., Drive)

Intent:

To attract passersby on MLK, Jr., Drive pathway by providing:

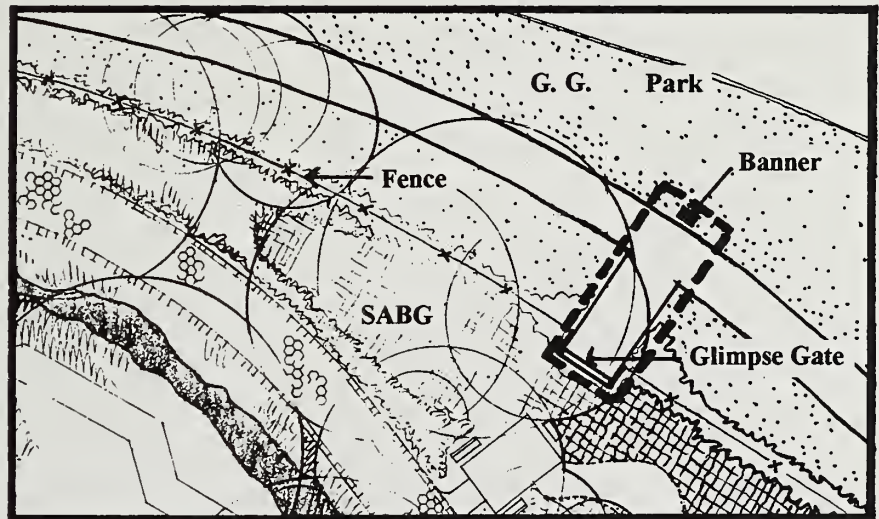
- A hint as to the special attractions on the other side of the "green wall."
- An opportunity, upon closer inspection, to actually see into specific features within SABG.
- An opportunity for signage presenting the mission of SABG.

Physical Description:



Each gate is composed of two vine-covered screens secured at right angles and flanking a solid weatherproof panel recessed slightly behind the line of main fencing. A narrow opening in the panel will provide a "glimpse" into a feature or garden space beyond. The panel could also support an information sign relating to the feature beyond and to at least one of SABG's major goals. A short ten-foot wide path segment will extend to the panel from the existing path. The spacing of the flanking vine screens repeats the spacing of columns at the Friend Gate. Opposite the gate across the existing pathway, a metal pole sleeve, embedded in the concrete and covered by a lockable brass cap flush with the surface, will

installed for a banner pole. As noted earlier, these poles could be easily locked in place and removed after short periods during major events such as plant sales at the Gardens.



These gates could be sufficiently modest in cost to be offered as attractive donor packages, and their placement could, in several cases, begin irrespective of the pace of development within the Gardens. Since the concept is drawn from the typical "peep-hole" construction fence, they could be installed specifically to draw subtle attention to the renewal activities within the Gardens.

Signage: General – Cost Opinion Item #40

Intent:

To create a unified family of informative, attractive, durable garden and gateway signs which will:

- Enhance educational value and enjoyment of the site, its geography and special features.
- Present SABG's mission.
- Be easily read and accessed, meeting the current standards of the ADA.
- Blend well with surrounding plants and hardscape in terms of height, bulk, color and solidity (entry ways are an exception).
- Be adaptable to growth and change within SABG's many different environments.

















The accompanying map indicates an idealized layout of major outdoor signs. It does not attempt to specify the location of minor signs or service access signs nor the exact location of thousands of plant identification signs. Also, it does not indicate the location of the hundreds of signs that already exist in the garden. In a few cases, recommendations have been made to relocate and redo some existing signs, such as the Cape Province sign. In all cases a detailed examination of these general sites will be needed before signs can actually be located to best serve their function and blend successfully with the surroundings. The following guidelines relate to the layout of three types of garden family signs. The exact locations of sign columns (only suggested in plan for the Main Entry Plaza and Friend Gate) should be based on more detailed site studies -- including visibility from adjacent roadways.

Exterior Identification Signs

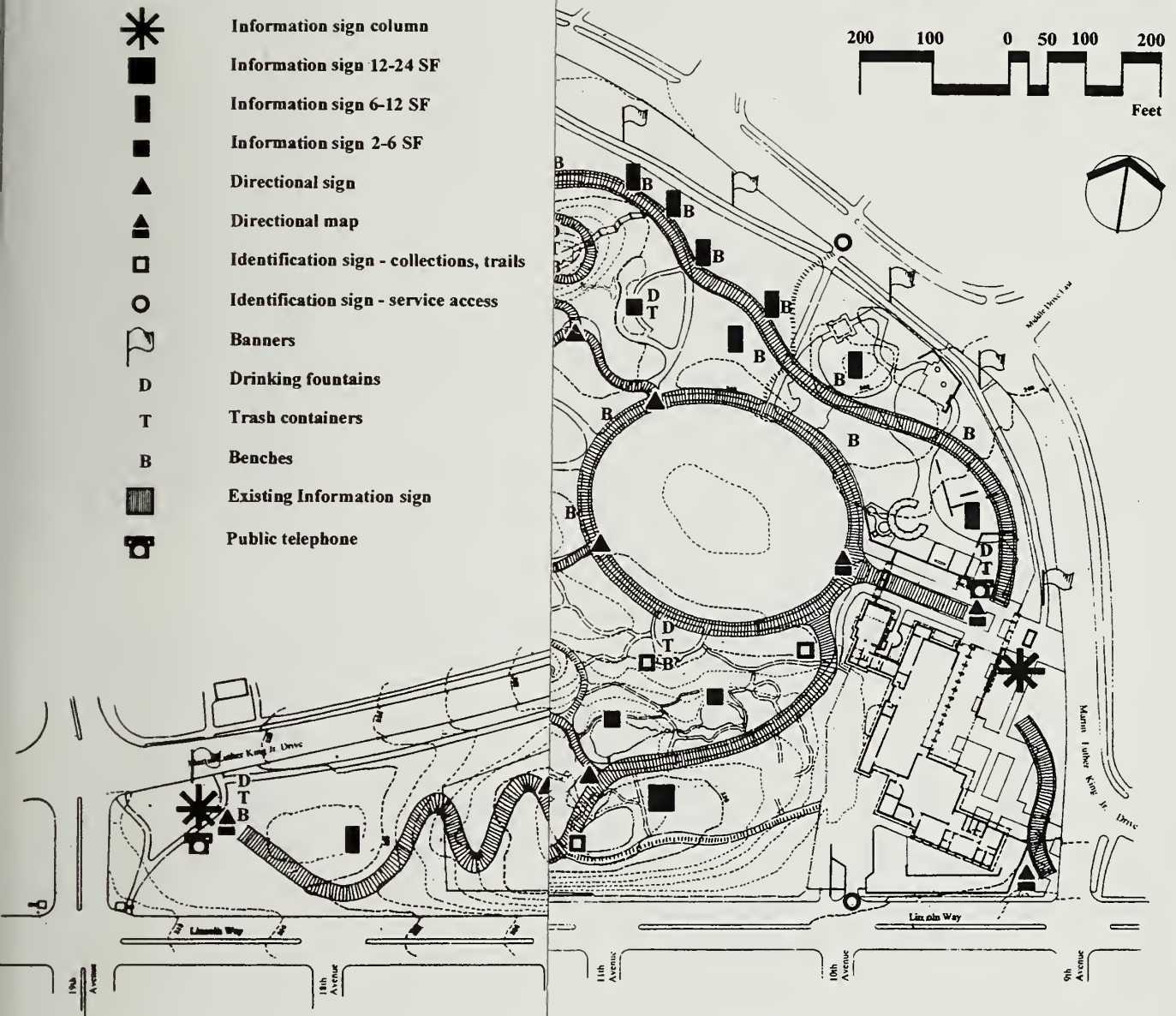
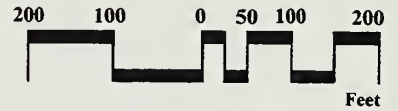
Intent:

To identify the site from the outside and mark major entrances and Glimpse Gate in a noticeable but not obtrusive manner for the pedestrian and passing motorist.

LEGEND

-  Information sign column
-  Information sign 12-24 SF
-  Information sign 6-12 SF
-  Information sign 2-6 SF
-  Directional sign
-  Directional map
-  Identification sign - collections, trails
-  Identification sign - service access
-  Banners
-  Drinking fountains
-  Trash containers
-  Benches
-  Existing Information sign
-  Public telephone

SIGNAGE & LANDSCAPE FURNISHINGS

















MASTER PLAN STRYBING ARBORETUM & BOTANICAL GARDENS SAN FRANCISCO, CALIFORNIA

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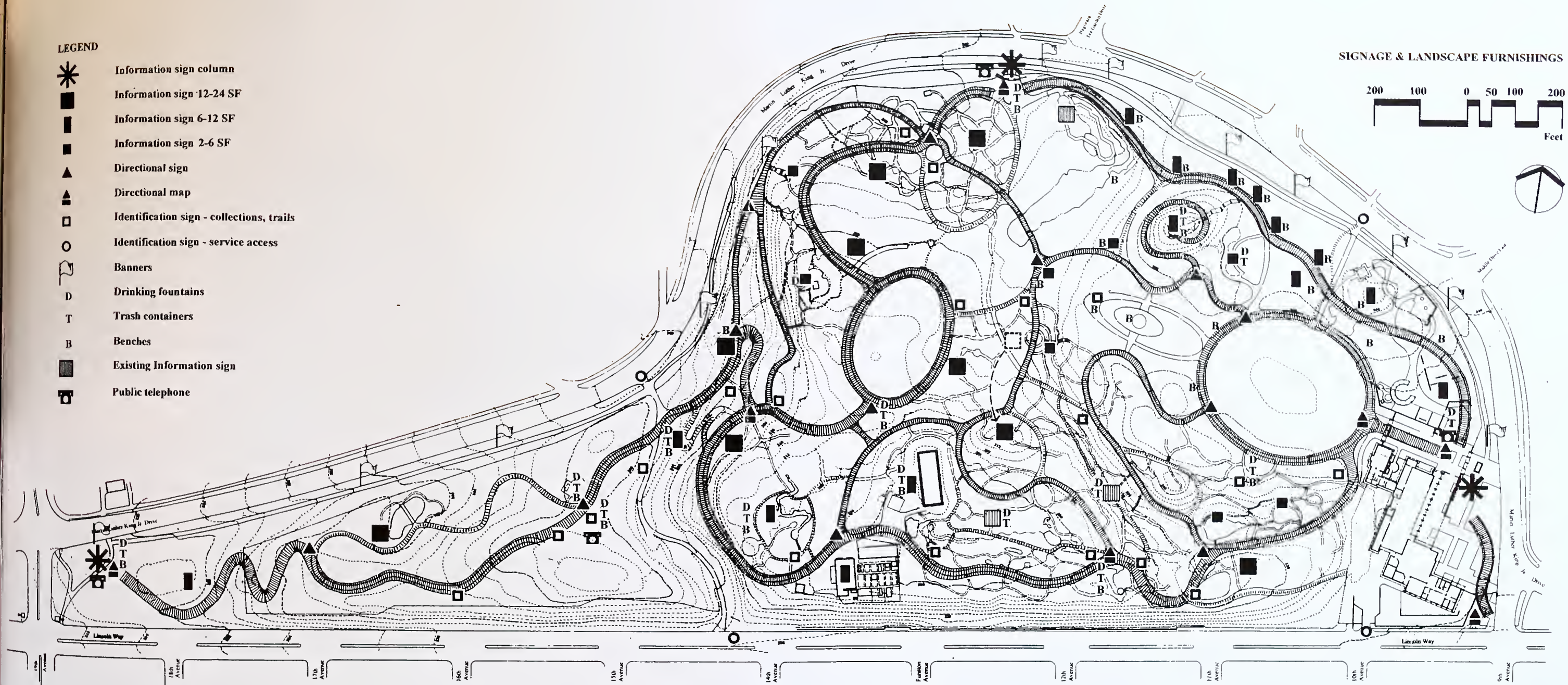
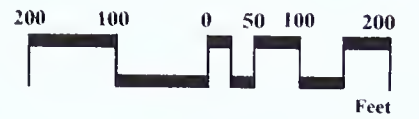
landscape architects:
TITO PATRI & ASSOCIATES

architects:
FERNAU & HARTMAN

LEGEND

-  Information sign column
-  Information sign 12-24 SF
-  Information sign 6-12 SF
-  Information sign 2-6 SF
-  Directional sign
-  Directional map
-  Identification sign - collections, trails
-  Identification sign - service access
-  Banners
-  Drinking fountains
-  Trash containers
-  Benches
-  Existing Information sign
-  Public telephone

SIGNAGE & LANDSCAPE FURNISHINGS



MASTER PLAN STRYBING ARBORETUM & BOTANICAL GARDENS san francisco, california

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in cooperation with
THE SAN FRANCISCO RECREATION & PARK COMMISSION

landscape architects
TITO PATRI & ASSOCIATES

architects
FERNAN & HARTMAN

**Physical
Description:**



Gateway Signs: These will be located at Main Entrance Gate, the Friend Gate and West Gate. They occur at the top of the two new proposed curving gateways at the Main entrance and the West entrance and as a retrofit atop the curving Friend Gate. The words "Strybing Arboretum & Botanical Gardens" will be represented in roughly 2-foot-high outline metal letters so as to be visible, particularly when seen against the sky, but not intrusive.

A special identification sign is proposed for the exterior face of the existing rock wall at Demonstration Garden Lot D-6 (6" letters with backing panel). 24" and 6" fabricated dimensional sheet metal letters will be mounted to gate and wall structures. The rock wall mounted sign has dimensional letters fastened to a perforated sheet metal backing supported by steel perimeter frame. Finish options for the dimensional letters are a) porcelain enamel, b) spray applied polyurethane paint, c) hot dipped galvanizing.

Copy to read *STRYBING ARBORETUM & BOTANICAL GARDENS*

Dimensional letters could be fabricated with removable backs to facilitate installation and maintenance. A porcelain enamel finish would be the most durable given the weather conditions at the Gardens, as it has the most resistance to color fading.

Two existing "historic" curbside signs on poles at Main and Friend Gates will remain without design change in conformance with the Golden Gate Park Master Plan. If, in the future, maintenance requirements result in changes to the details of these signs, they should comply with the standards set by the Park Master Plan for "typical park feature signs."

Sign Columns: These will be located at the Main Entrance, Friend Gate and West Gate Entry and will provide a display support system to announce activities and special events.

In principle, the sign column should be a freestanding slender pole-like fabricated steel structure with integral lighting. It will support changeable fabric banners made of nylon fabric or nylon mesh. A system of removable fabric sections will facilitate changeable messages and images applied with prestocked die cut, adhesive-back vinyl characters or screen printing.

Banner information could be updated by detaching the removable section from the banner, while the banner stays in place. Removable fabric sections may use a system of zippers or "Velcro" connectors to be attached and unattached to the banners. The letters should be sized for easy readability from the park road.

Banner Poles: Lockable brass-capped sleeves set flush top to grade in concrete will allow lightweight fiberglass or PVC poles to be locked into place, preventing theft. The lightweight poles can be easily placed and removed during special events such as plant sales. The fabric banners might be imprinted with the SABG logo or might be simple panels of solid color, adding eye-catching color and movement to the Gardens' perimeter.



Signage for Buildings and Rooms

Intent: To have all rooms and hallways be in compliance with ADA guidelines.

**Physical
Description:**

Permanent Signs:

Signs which designate permanent rooms and spaces whose function will not change must comply with the current ADA standards, including tactile and Braille lettering.

- a. Characters must be raised exactly 1/32";
- b. Characters must be accompanied by Grade 2 Braille;
- c. Characters must be upper case and sans serif or "simple serif" type style;
- d. Tactile characters must be min. 5/8" high, max. 2", all caps;
- e. All equivalent written descriptions must be placed directly below symbol;
- f. Written descriptions cannot be within symbol's background field;
- g. Border dimension of symbol background field must be min. 6" high;
- h. Characters & background must be eggshell, matte, or other nonglare finish;
- i. Characters must adequately contrast with the background;
- j. Characters must be mounted on the wall adjacent to the latch side of door;
- k. Characters must be mounted to avoid door swing and protruding objects;
- l. Characters must be mounted at a height of 60" from floor to centerline of sign.

Directional & Informational Signs:

Wall mounted signs which provide direction to or information about functions and spaces are not required to have tactile and Braille lettering. However, they must meet requirements for character proportion and height, sign finish and contrast.

- a. Characters must have a width-to-height ratio of between 3:5 and 1:1;
- b. Characters must have a stroke width-to-height ratio of between 1:5 and 1:10;
- c. Characters must be sized to viewing distance;
- d. Characters & background must be eggshell, matte, or other nonglare finish;
- e. Characters must adequately contrast with background.

Temporary Signs:

Building directories, menus, and all other signs which provide temporary information about rooms and spaces, such as the current occupants, are not required to comply with ADA guidelines.

Entrances & Restrooms:

The international symbol of accessibility must be displayed at accessible entrances if all entrances are not accessible. Directions must be provided from inaccessible entrances to accessible ones. Similar guidelines apply to restrooms.

Parking Areas:

Accessible parking spaces and loading zones must be marked by a sign showing the symbol of accessibility. The sign must be located so that it cannot be obscured by a parked vehicle.

Assembly Areas:

The international symbol of access for hearing loss must be displayed where assistant listening systems are required. A description of the specific system must be posted.

Areas of Rescue Assistance:

Areas of rescue assistance must be identified with illuminated and/or nonilluminated signs. Instructions must be posted on how to use the area during emergencies. Inaccessible exits must be identified. Signs may be required to direct visitors to areas of rescue assistance.

Building/Public Telephones:

Text telephones must be identified with the TDD symbol. Volume control telephones must be identified by the international symbol for hearing loss.

Based on these principles, a comprehensive signage effort should be initiated involving the following steps:

- Detailed descriptions of text and graphics required at each signage location. Include a phasing plan.
- Development and selection of schematic sign designs.
- Preparation of signage working drawings and cost estimates.
- Solicitation of competitive bids from signage fabricators and contracting with preferred bidders.
- Simultaneous consultations with professional graphics and signage designers as well as a signage fabricator.

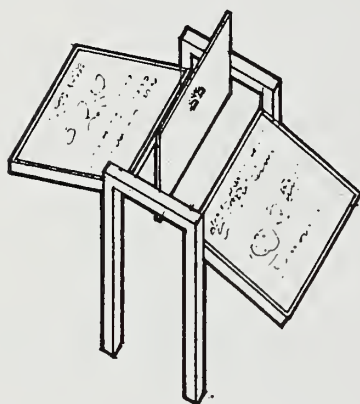
Garden Signage

Information signs should be located as closely as possible to the center of a Garden feature or a collection. It may be more appropriate to vary from this rule if there is an opportunity to take advantage of a special element such as a uniquely beautiful tree or water body. Information sign groups should be located on or be directly accessible from Type C pathways and, keeping in mind that these signs should, wherever possible, be accessible to those in wheelchairs, supplementary signage may be necessary in cases where the impacts of providing wheelchair access would be unreasonably damaging to the environment. The existing inaccessible New World Cloud Forest is a prime example. In general, information signs should not be located directly on the Promenade or Type A or B pathways.

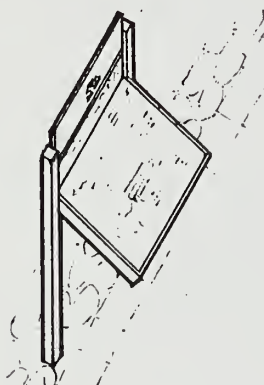
The leading edge of information platens (or sloping information plate -- text plan or other graphics) should be a minimum of one foot away from the 12-foot-clear driveable dimension of the pathway. However, cobble-type paving under the signs must continue outward from this dimension as is necessary to accommodate wheelchair access to the signs. The sides of single platen signs should be a

minimum of two-feet from adjacent retaining walls where wheelchair access not needed. Where it is, a distance of 42-inches should be provided.

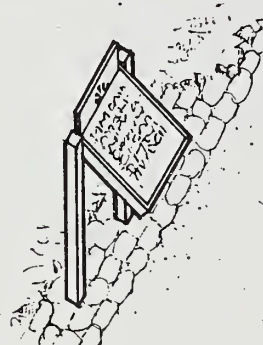
An accompanying plan diagram shows three types of potential layouts for information signs. These signs should be limited to approximately 24 s.f. of information surface. The existing Cape Province sign has approximately 35 s.f. of such surface, whereas the New World Cloud Forest sign has only 20 s.f. More than 24 s.f. of static graphic information may offer more information than people are willing to read, and the visual impact of signage over this limit may conflict with the aesthetics of the garden surroundings.



Information Sign 12 - 24 s.f.



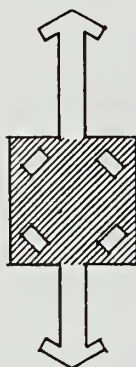
Information Sign 6 - 12 s.f.



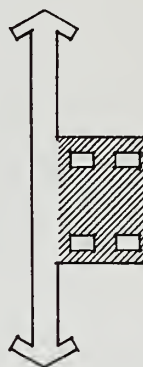
Information Sign 2 - 6 s.f.

Single Platen

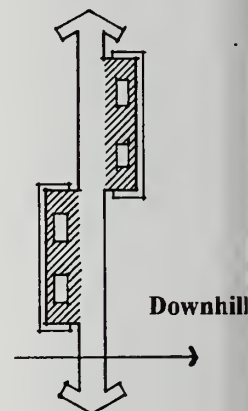
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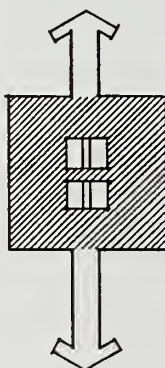


Parallel

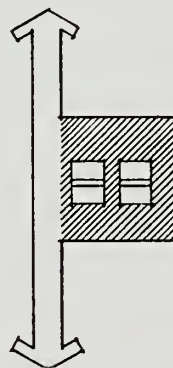


Double Platen

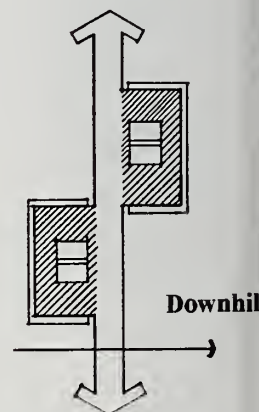
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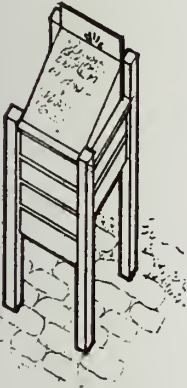
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Typical Signage Layout Diagrams - Information Sign Group

a. **Informational Signage Group**

- *In Line:* Clustered directly in the line of travel of the path. Pedestrian circulation passes through the cluster, special pavement such as unit pavers occur under the sign and in the line of travel to reinforce the identity of the sign group. An example is the existing Arthur Menzies Native Plant Garden.
- *Off-set:* Signs are grouped in an area directly adjacent to the path out of the line of travel.
- *Parallel:* Where a cross-slope is encountered signs are mounted at the edge of the path or on retaining walls that would, as required, provide a small leveled area. An example of this would be the New World Cloud Forest signs, which however do not presently make use of retaining walls -- an improvement that would help make this exhibit more attractive and comfortable.

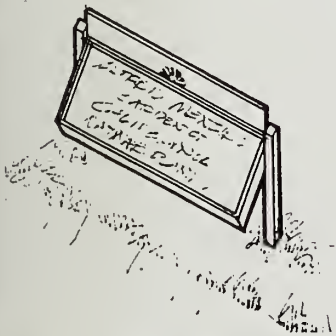


Directional Map



Identification Sign - service access

- b. **Directional Signs:** Appropriate primarily on Types A and B pathways but could occur on smaller paths as necessary. They should occur primarily at intersections and gateways. They are set adjacent to the path, but 12-inches clear of the 12-foot driving width. They will be set, like the information signs, in a field of cobble-type pavers, expanding the visual width of the path only as necessary to provide for appropriate or adequate access to the sign for all users of the garden. Because they could provide information on emergency services, they must be wheelchair accessible and cannot be placed in planting areas.
- c. **Service and access signs:** These occur adjacent to parking areas at the service gates and service roads. They generally will appear off of paved areas in planted areas adjacent to such pavements or drives. Disabled person parking sign must be particularly high (ADA specified) or in a position where it cannot be screened by other vehicles or planting.
- d. **Collection identification signs:** These will be found adjacent to pathway types A, B and C and are set in among plants in most cases but may be placed in a small field of unit paving as described.



Identification Sign - collections, trails

Detailed Design Goals

While this study has identified basic sign types and general design parameters, the signs cannot be finally "designed" without knowledge of the type and amount of information desired at each location. The following goals are intended to guide this next design step in the future.

- Goal 1:** *The sign frames and signs should be as modular as possible, for ease of construction, fabrication, changeability, and to help minimize initial capital costs.*
- Goal 2:** *The sign frames and signs should be as weather-resistant as possible given the unusually harsh summer fog and salt-laden winds of the site.*
- Goal 3:** *The location, physical height, type of information, type of lettering and graphics, level of contrast, etc., for all signs should meet minimum ADA requirements.*
- Goal 4:** *The color and size of supporting frames, posts or columns should be designed to blend as much as possible with surrounding plants. When possible, signs should be set with a background (such as planting, planted slope or structure) so that they do not become overly prominent and highly visible simply by being separated from features of comparable size, color or value. In order to minimize a proliferation of signs, they should be functionally multipurpose with the use of a sliding rail or slotted frame design to facilitate addition of new side panels. For example, directional signage may include collection identification, ADA route, location of telephones, etc.*
- Goal 5:** *To enhance Garden identity, all signs should incorporate the SABG logo (currently the outline of a California Buckeye tree).*
- Goal 6:** *Wherever possible, maps, graphics and, in some cases of ADA compliance, even text, should be presented in raised letters or images for the visually impaired. In the case of maps, a tactile form is most understandable even to normally sighted individuals.*
- Goal 7:** *With respect to basic or emergency services, such as telephones, restrooms and so forth, standard international symbols should be used to minimize the use of written words.*
- Goal 8:** *Because of apparently significant foreign visitation, information regarding the sources or locations of emergency services available at SABG should be presented in foreign languages at each of the three major gates. Further field visitor surveys (counts and interviews) will be necessary to determine appropriate languages.*

Fabrication and Materials:

Freestanding sign structures are located throughout SABG and would be fabricated of 3"+ square steel tube uprights combined with a "kit of parts" which should consist of:

- 1) square tube steel support members with rails or slots;
- 2) sign panels;
- 3) projecting easels with graphic panels;
- 4) tactile 3-dimensional maps;

- 5) header panels with logo.

Finishes:

There are several options for finishes appropriate to the special conditions at SABG.

Steel square tube frames and support members:

- 1) spray applied polyurethane enamel paint;
- 2) hot dipped galvanized;
- 3) "Korten" prerusted type finish.

Sign panels and projecting easel graphic panels:

- 1) porcelain enamel;
- 2) polyurethane enamel paint with computer-cut adhesive-back vinyl image;
- 3) photo engraved with black and silver aluminum;
- 4) subsurface screen applied image to clear acrylic.

Tactile 3-dimensional maps:

- 1) cast resin with applied image;
- 2) cast bronze with raised image;
- 3) vacuum formed polycarbonate plastic with subsurface image.

Header panel with logo:

- 1) aluminum panel with water jet or laser-cut logo with polyurethane paint finish;
- 2) aluminum panel with polyurethane paint finish with applied computer-cut adhesive-back vinyl logo.

It should be noted that wherever dissimilar metals come in contact with one another, rubber spacers or similar material should be used to prevent electrolytic process.

Future Communications

The design schemes covered in this master plan pertain to static signage. For future reference, many new technologies are making forms of electronic signage and graphics feasible for application at this site. For example, video displays at the Orientation Center could illustrate concepts such as plant growth and change, depicting developments that cannot be seen in real time. The story of the creation of the Gardens from the original sand dunes to its present configuration could be told and illustrated with an interactive video presentation.

Self-guided tours of the site could be offered, using portable audio CD-ROM guides. Visitors would be able to select a display or plant they wanted to have more information about, punch in a number, and hear instantly detailed information on the subject. With this flexible method the visitor selects sections and topics of interest and is not constrained by a prerecorded tour. Each self-guided tour would be unique, reflecting the interests of the visitor.

A system of touch-screen orientation kiosks could be located throughout the grounds at strategic intersections. The kiosk would display "static" graphics

(posters, sign panels, and maps) in addition to CRT monitors programmed with interactive touch-screen information. Visitors could use these orientation kiosks to get site information such as area/section locations, ADA/accessible paths, restroom and telephone locations and exits.

Landscape Furnishings – Cost Opinion Item #41

Intent:

To provide a consistent family of factory-fabricated or site-assembled landscape furnishings which will:

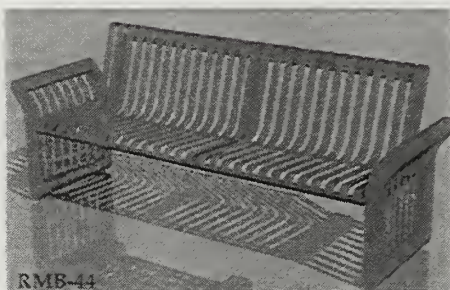
- Integrate with the dominant appearance established by the renewed architectural elements.
- Withstand the unique weather conditions of the site, vandalism and heavy usage.
- Be easily accessed and maintained.

Physical: Description:

The design and/or selection of furnishings will provide a complete environment and must meet the design goals anticipated for SABG. The form, color and placement of donor plaques, benches, drinking fountains, lighting fixtures, etc. should be in concert with the more visible elements, such as the improvements to the County Fair Building and to the major gateways.

Where particular items are to be purchased from manufacturers as capital improvements or replacements, the source should be a firm which has been in the business for a substantial time and which has a good reputation for quality and cooperation in terms of replacement or repairs.

Brass Donor Plaques: There has already been considerable investment in brass donor plaques throughout the Gardens. They are highly weather-resistant and permanent as presently designed and are usually placed on vertical surfaces such as walls or benches. They can be imbedded in concrete or other masonry upon paving to great effect, opening up multiple opportunities for donors (e.g. each of the \pm 9x9 finished colored concrete panels at the Main Entry Plaza could be a donor target).



Benches: Many benches have been distributed throughout the Garden over the years, most of which were provided by donors as memorials. These are almost exclusively wood (generally cedar or redwood) with post supports, without armrests and of a heavy timber style popular in public parks. Their lifespan is generally between 15 and 25 years. While their replacement provides continuing opportunities for donors, the overall character of CFB renovations and the Education Center suggest the use of different, more urban styles and, in some cases, more permanent materials such as painted or galvanized wrought iron. The criteria for these benches should be as follows:

- 1) They should be no longer than 6- to 8-feet because of their frequent placement paralleling sloping pathways where they should be placed with the long length of the seat level;
- 2) Armrests should be provided to add comfort and to be more in keeping with the gardenesque, less park-like surroundings;
- 3) They should have high backs with back-sloping seats. The backrest should grade into a curved juncture with the seat;

- 4) Four support posts or feet (one at each corner) would be more garden-like;
- 5) Seat height should be a minimum of 15-inches and a maximum of 20-inches from the ground (bear in mind that higher seating levels are more comfortable for the elderly, many of whom are garden lovers);
- 6) Paint should be a baked powder coat or acrylic enamel unless galvanized finish is chosen. The color should match the new sign structures (forest green) or complement the range of colors proposed for metal surfaces at the CFB. Wooden benches should meet the same criteria (i.e. with arm rests and four-leg support). Commercially manufactured benches using recycled plastic should be considered and possibly tested.

Selected bench locations shown on the Signage and Furnishings Map represent special conditions -- for example at an important pathway intersection or at view and vista points. In general, benches should be located in conjunction with signage clusters or major intersections and adjacent to restrooms and drinking fountains. This clustering with other furnishings is to prevent proliferation of these items individually throughout the gardens. Where there is adequate room, two benches should be placed at 90-degree angles to each other to encourage socializing. Benches spotted along pathways in the absence of intersections or information nodes should not be placed closer than 200-feet.

A series of benches (wood, plastic, metal -- several finishes) meeting the criteria stated above should be placed in a group near the Nursery Complex for testing for a period of three years before selecting a single type.

Drinking Fountains, Trash & Recycling Containers and Public Telephones

Intent:

To provide these services at key locations and convenient intervals in a discreet manner that does not conflict with the beauty of the Gardens.

Physical Description:

These items should meet the same durability criteria described above for metal benches. The location of drinking fountains and trash receptacles should be carefully selected so that they are not prominent or intrusive in the landscape, but instead are softened by a backdrop of vegetation or topography. They should be sufficiently off of the main pathway, but accessible for wheelchairs. The pavement around these would be cobble-type unit pavers extending as far outward as necessary to clear the 12-foot-wide driving corridor.

The choice of designs in public telephones is limited, but their use is important and they should be located just outside the Main Gate, the Friend Gate and at West Gate. The location of and accessibility to public telephones is important not only because of ADA requirements, but for reasons of safety and convenience.

There is some choice as to color of trash containers and drinking fountains, but acceptable commercially available designs are limited.

Trash receptacles should have a 55-gallon removable container and should be designed to be secured at the base in a level position. The flared-mouth model with flat metal bands is a style that would be in keeping not only with metal benches but with the detailing of architectural renovations at the CFB, the new gateways and architectural screens. A compatible or matching style should be



S-42

used for recycled-materials receptacles. Drinking fountains must be accessible in design.

It may be feasible to start the transition to these items in the near future as older furnishings are phased out. Since at present there is no acceptable standard trash receptacle in the Gardens, this might be the first type of furnishing to begin replacing. The selection, purchase and testing of these furnishings should begin as soon as possible.

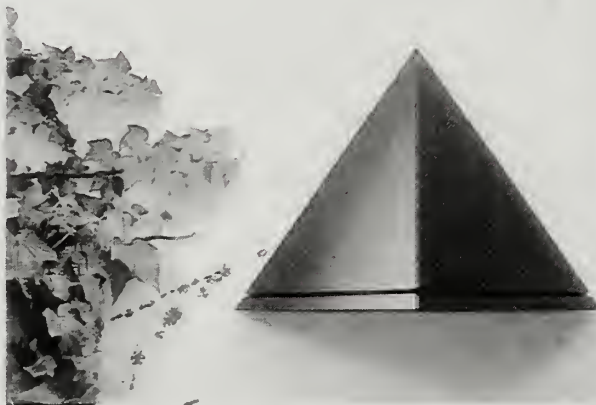
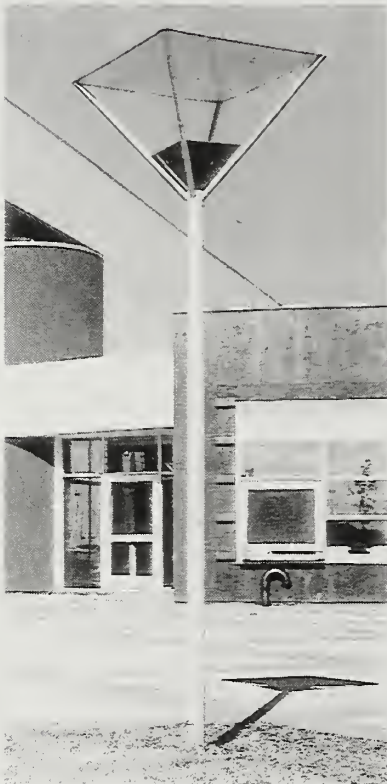
Lighting

Intent:

To provide adequate tasteful lighting for security, display and decorative purposes.

Physical Description:

Providing security lighting for staff, volunteers and guests making use of the CFB facilities at night is critical. Decorative and display lighting illuminating and enhancing architectural details or special garden features or plants at low or other subtle levels should be subtle, indirect and designed in a manner that does not conflict or intrude upon the sylvan environment of Golden Gate Park.



It is assumed that a significant level of lighting will be associated with the Bus Stop Plaza at the intersection of Lincoln Way and 9th Avenue and with the accompanying signage, colonnade and gateway features. Such lighting should, in terms of style and type of light cast, make a logical transition to the lighting around the CFB. Seven potential light types for use at the CFB are listed below:

- 1) **Bollard light:** usually 30- to 40-inches high;
- 2) **High overhead light:** either spot or flood shining vertically downward (usually from an overhead architectural structure, column or pole for coverage of wide areas);
- 3) **Wall lamp:** affixed to a building wall, garden wall or masonry column and shining downward (for display or decorative effect over limited areas);

- 4) ***Up-lamps:*** waterproof subsurface fixtures with heavy-duty shatter-proof acrylic lenses that provide a gentle upward glow for architectural features, special trees or simply as guiding points of light on a paved ground plain;
- 5) ***Step lamps:*** usually recessed into the surface of a step riser or in a nearby wall to provide clear definition of stepped or ramped surfaces in limited areas;
- 6) ***Low-planting lights:*** bell or other low-canopy lights with the source of light concealed (used to highlight special planting displays over limited areas);
- 7) ***Pedestrian standards:*** small pole lamps, usually between 12- and 14-feet high, used where a broader area of lighting is needed (and where there are no convenient structures which can be used as supports) but where high overhead lights would be obtrusive.

Service Lights:

There will be a need for service lights in special areas such as the roll-up door to the Gallery or outside the Classroom at the Education Center. These should be switched for intermittent use for short periods. Lighting at the Nursery Complex will also need to conform to these guidelines. Proper placement, orientation and cutoff design will be necessary to avoid impacting the adjacent residential neighborhood or passing vehicles. Functional lighting of walking surfaces should be emphasized with the up-lighting of buildings or structures limited to a few tasteful locations.

In all the cases above, with the exception of the ground-level up-light, the source of light should be concealed or obscured by lantern cutoff panels. Low-voltage systems should be considered for low-planting or bollard-type lighting.

All visible fixtures should be selected or designed to complement the new architectural detailing of the CFB, making use of similar finishes, colors and shapes. In general, angular lamp canopies will be more appropriate than rounded or spherical ones. Fixtures imitating plant or animal forms would be out of place, as would spherical globes.

Lighting Zones:

A simplified plan diagram showing the general zones where these various lighting types might occur in the vicinity of the CFB is included in the appendix. A series of regularly spaced bollards or plant lights following the main Promenade (not shown) could be particularly effective if night use of the Thomas Church Pavilion and Glade or Demonstration Gardens is considered. Lighting at the Church Pavilion should take its cue from the pavilion structure itself and could make use of wooden or hidden fixtures to provide subtle but effective lighting. Low-level lighting could also occur at the Friend Gate and West Gates. All lighting should be controlled by an articulated switching system allowing for selective lighting of different zones around the buildings and other features.

The lighting should, wherever possible, make use of energy-conserving fluorescent or low-voltage systems. High-pressure sodium lights which cast an eerie yellowish glow should be avoided and lighting that illuminates plants, flowers and architectural finishes should reinforce natural colors. "White spots" (areas of overly concentrated lighting) should be avoided in favor of more general low-level indirect illumination. Smaller, lower lights should be used where possible to create regularly patterned pools of light connecting features along paths or plazas.

Necessary foot-candles and spread cannot be determined until specific fixtures are selected. The plan diagram suggests areas likely to be used at night where security could be a concern. While the one-foot-candle standard normally used along urban streets may be a desirable standard for traffic safety reasons, it would in all likelihood be too high for the general design qualities anticipated at SABG. Lighting of these areas should attain a sufficient level to provide the necessary level of nighttime security. Frequently at potential danger zones, high light levels are not as important as having unobstructed views from adjacent offices or streets which can be policed.

Because it is important that lighting complements Park standards, professional lighting designers should be engaged to implement the general goals set here. They should work closely with park planners and landscape architects to insure a compatible system.

Treatment of Existing Special Garden Features

Intent: To map and identify existing special Garden features to insure their protection and maintenance in the future.

Physical Description: In addition to its myriad attractive garden and forest settings, vistas and open meadows, SABG presents scores of important attractions. These include beautiful ponds, streams and rivulets, especially tall trees and a variety of outstanding hand-constructed items, such as cut limestone "monastery" wall work, lovely arbors, gazebos, bridges and statues.



Of the man-made features, perhaps the most attractive and memorable are the handlaid walls of monastery stone found throughout the gardens. The stone originates from a centuries-old Spanish monastery imported to the U.S. by William Randolph Hearst. Weathering to a pale mottled white and beige color with patches of moss growing in cool, moist locations, the stones impart a striking "patina" and sense of great age. This quality is significant enough that similar stonework has been proposed for use in the Educational wall and at the Esplanade and as an edge band for the promenade connecting Main Gate with Friend Gate.

While many of these features require little maintenance (such as the limestone walls), others (i.e. wooden benches and ponds) require a great deal more attention. The benches tend to deteriorate rapidly because of the severe weather conditions during the summer months. Ponds also require considerable maintenance and periodic removal of built-up silt and organic matter. Where the public has access, such as at the McBean Wildlife Pond, extensive damage caused by trampling necessitates constant upkeep. Another issue is the variety of path edge treatments found throughout the gardens. While this is the natural result of different hands and different gardeners over the years, these edges tend to deteriorate easily. More detailed discussions of approaches to these design and maintenance issues are provided in Chapters 3 and 4.

With few exceptions, this Master Plan anticipates preservation and, where necessary, improvements or restoration of these items. From a planning standpoint, it is important to present a relatively consistent designed environment which will link together the Gardens' richly varied collections. In view of this need, several items are slated for significant reconstruction or change:

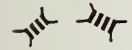
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Major water bodies



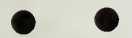
Minor water bodies/ streams/ rivulets



Bridges



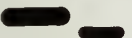
Creek beds



Special existing seating areas



Tall trees



Existing gates



Statues, monuments



Feature rockwork

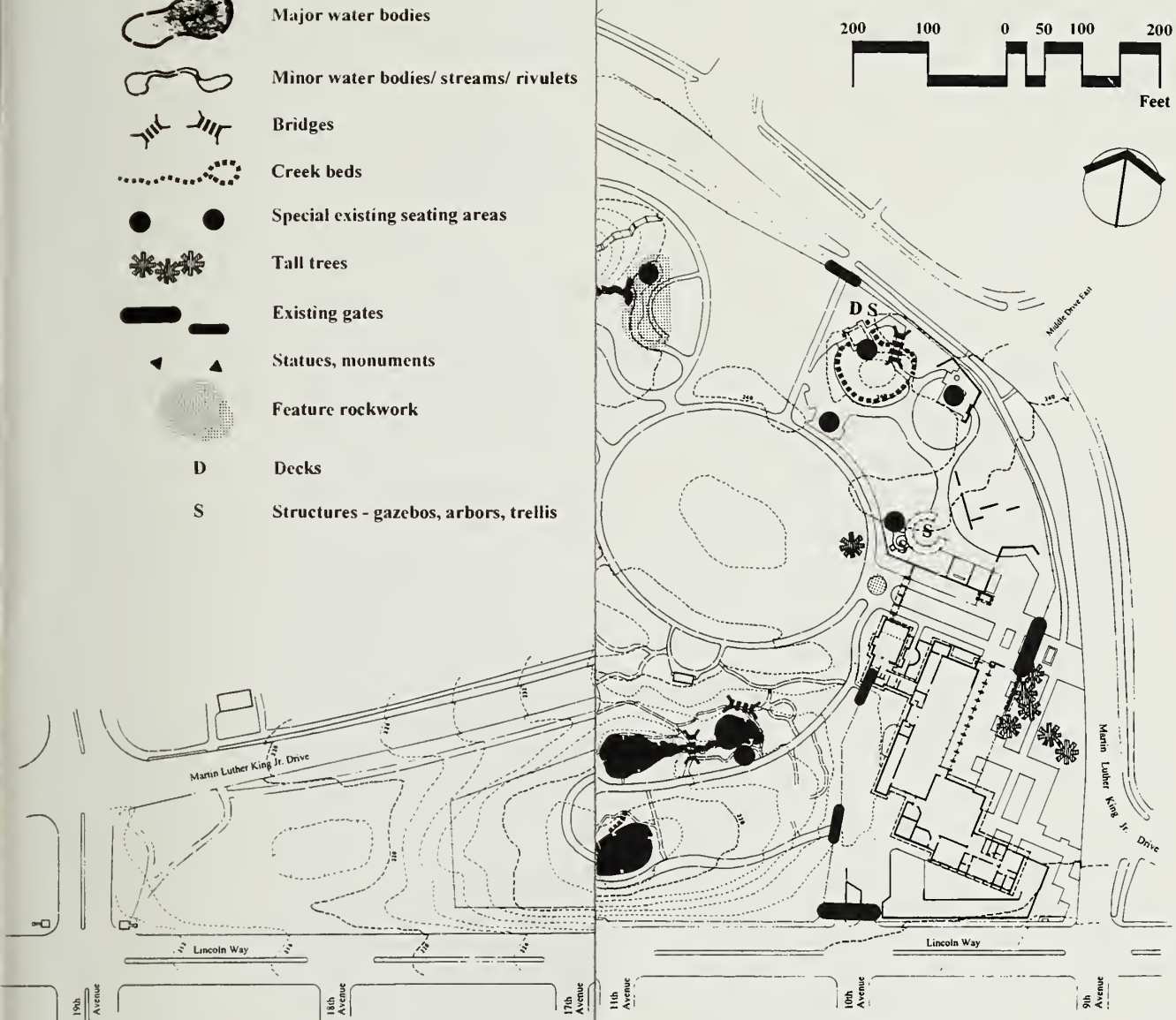
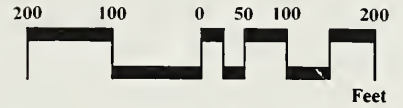
D

Decks

S

Structures - gazebos, arbors, trellis

SPECIAL GARDEN FEATURES



MASTER PLAN STRYBING ARBORETUM & BOTANICAL GARDENS san francisco, california

sponsored by:

THE STRYBING ARBORETUM SOCIETY

in cooperation with:

THE SAN FRANCISCO RECREATION & PARK COMMISSION


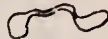
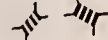

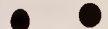

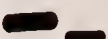
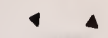
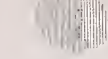

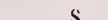
landscape architects:

TITO PATRI & ASSOCIATES

architects:

FERNAU & HARTMAN

LEGEND

-  Major water bodies
-  Minor water bodies/ streams/ rivulets
-  Bridges
-  Creek beds
-  Special existing seating areas
-  Tall trees
-  Existing gates
-  Statues, monuments
-  Feature rockwork
-  D Decks
-  S Structures - gazebos, arbors, trellis

SPECIAL GARDEN FEATURES



MASTER PLAN STRYBING ARBORETUM & BOTANICAL GARDENS SAN FRANCISCO, CALIFORNIA

sponsored by
THE STRYBING ARBORETUM SOCIETY
in cooperation with
THE SAN FRANCISCO RECREATION & PARK COMMISSION

landscape architects:
TITO PATRI & ASSOCIATES

architects:
FERNAN & HARTMAN

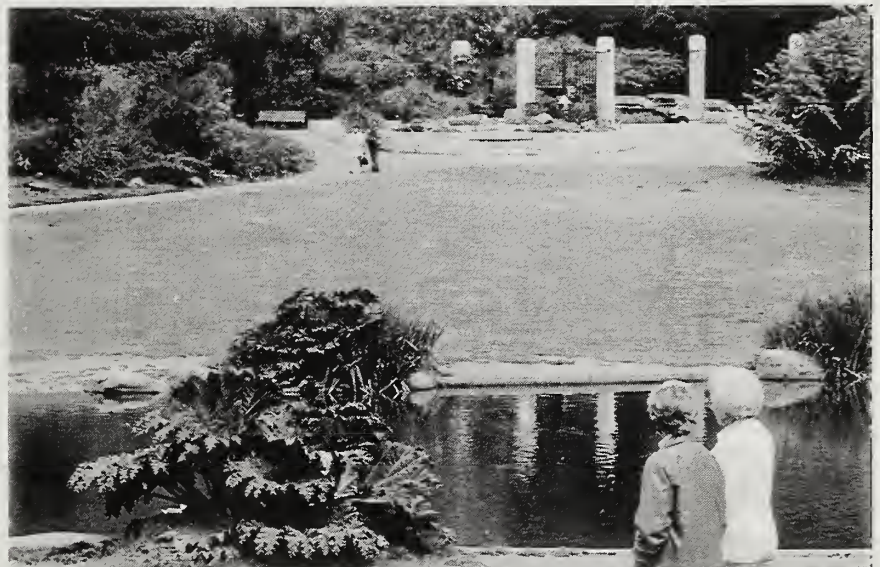
- 1) The pathway and bridge adjacent to the Thomas Church pavilion;
- 2) The pathway approach to the Jean Wolf Garden;
- 3) Existing arbor, block wall and wrought-iron gateway at Main Gate;
- 4) The environment immediately surrounding the Tetlow Fountain (i.e. the removal of elliptically shaped concrete paving patterns);
- 5) The planted circle of monastery stones at Friend Gate (to be revised);
- 6) The bench and railroad-tie steps surrounding the top of Heidelberg Hill (to be expanded).

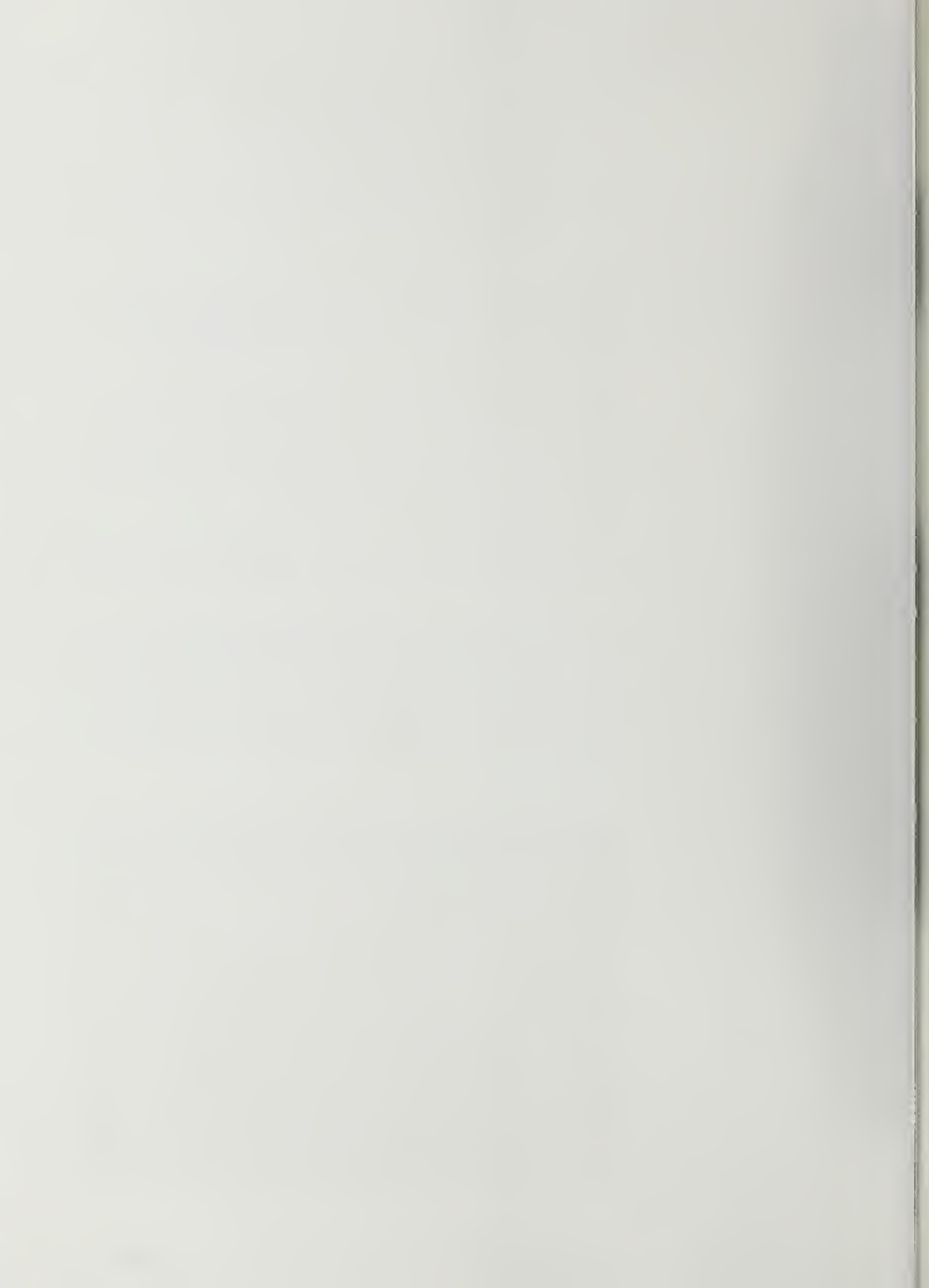
There are several small pavilions or display gardens in the Demonstration Gardens which will be removed and replaced with construction of the Education Center. The Service Area and Arbor near the Thomas Church Pavilion will be rebuilt and a new service area and gate built directly to the northwest.

Existing walls or features consisting of monastery stone should be protected from damage or removal. In addition, this stone should be used wherever there is a need for up- or downslope retaining walls exceeding curb height. On upslopes, when viewed from a pathway or normal vista points, retaining walls made of other materials (such as concrete masonry units) can be capped with monastery stone. Sources of monastery stone should be identified and if possible tagged for SABG use as required through appropriate channels.

All existing bridges should be maintained to insure safety and should be brought up to ADA standards if necessary, including the appropriate curb and handrails as required.

Since they are very attractive features, all existing ponds should be restored and preserved as necessary. However, since many of these ponds rely on the "open spigot" source of water, SABG should investigate the eventual installation of circulating water systems with pumps and filters, both to conserve water and to improve water quality. No ponds should be deeper than 30" for safety reasons. Edge treatments should be designed to accommodate the anticipated impact of increasing numbers of visitors. Design treatments are discussed in further detail in Chapter 3.







*Survey of
Existing
Garden
Conditions*

CHAPTER 5

SURVEY OF EXISTING GARDEN CONDITIONS

MAINTENANCE ISSUES

Microclimate



The *Microclimate Map* is based on interviews with gardeners, field observations by the design team (including wind-speed measurements in selected areas) and a map analysis of average shade conditions (existing and projected after removal of old or hazardous trees). This map will be a useful tool in guiding staff and volunteers in at least two types of decisions. One is the selection of plants for each microclimate found in the Gardens. The other is in the choice of programs which make the most of those areas that are least exposed, particularly to the pervasive summer winds. It is a generalized map, based on mappable geographic conditions, and as such cannot be considered an entirely precise document. This will, however, provide the basis for future refinement as gardeners and volunteers can provide input based on observations and, in some cases, measurements as appropriate. The criteria used are related to the concept of "amenability" for nonendemic plants. The value system, therefore, suggests that the most amenable areas are those which are protected from the winds and receive the most sun or light.

Following are the mapped variables used:

- 1) **Slope Orientation:** South-facing slopes are warmer and less exposed to the wind-exposed western faces and, of course, less shaded than north-facing slopes.
- 2) **Slope Gradient:** Slopes over 50% become important factors depending on their orientation (north, south, west, etc.). South-facing slopes, being closer to right angles with the sun, absorb and hold more warmth.
- 3) **Shaded vs. Open Areas:** Making use of detailed tree condition information, those areas which, on average, are shadowed (during the summer equinox of June 21st, from 10am to 2pm) were identified. The map projected removal of old or hazardous trees.
- 4) **Wind Exposure:** Those areas west of the major north/south ridge (approximately opposite 14th Ave.) were distinguished from those to the east. Wind-speed measurements were taken in both of these.

Five Amenability Zones were determined as follows:

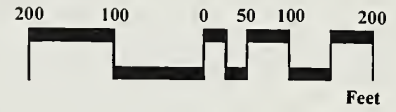
- 1) **Most Amenable:** areas facing South (S/SE/E); flat or steep; open.
- 2) **Above Average:** areas facing South (S/SE/E); flat or steep; shaded.
- 3) **Average:** areas facing West (W/SW/NW); flat or steep; shaded or open; also areas facing North (N/NW/NE); flat; open.
- 4) **Below Average:** areas facing North (N/NW/NE); steep; open.
- 5) **Least Amenable:** areas facing North (N/NW/NE); flat or steep; shaded.

LEGEND

Microclimate Zones (See text)

- 1. Most amenable
- 2. Above average
- 3. Average
- 4. Below average
- 5. Least amenable

MICROCLIMATE MAP



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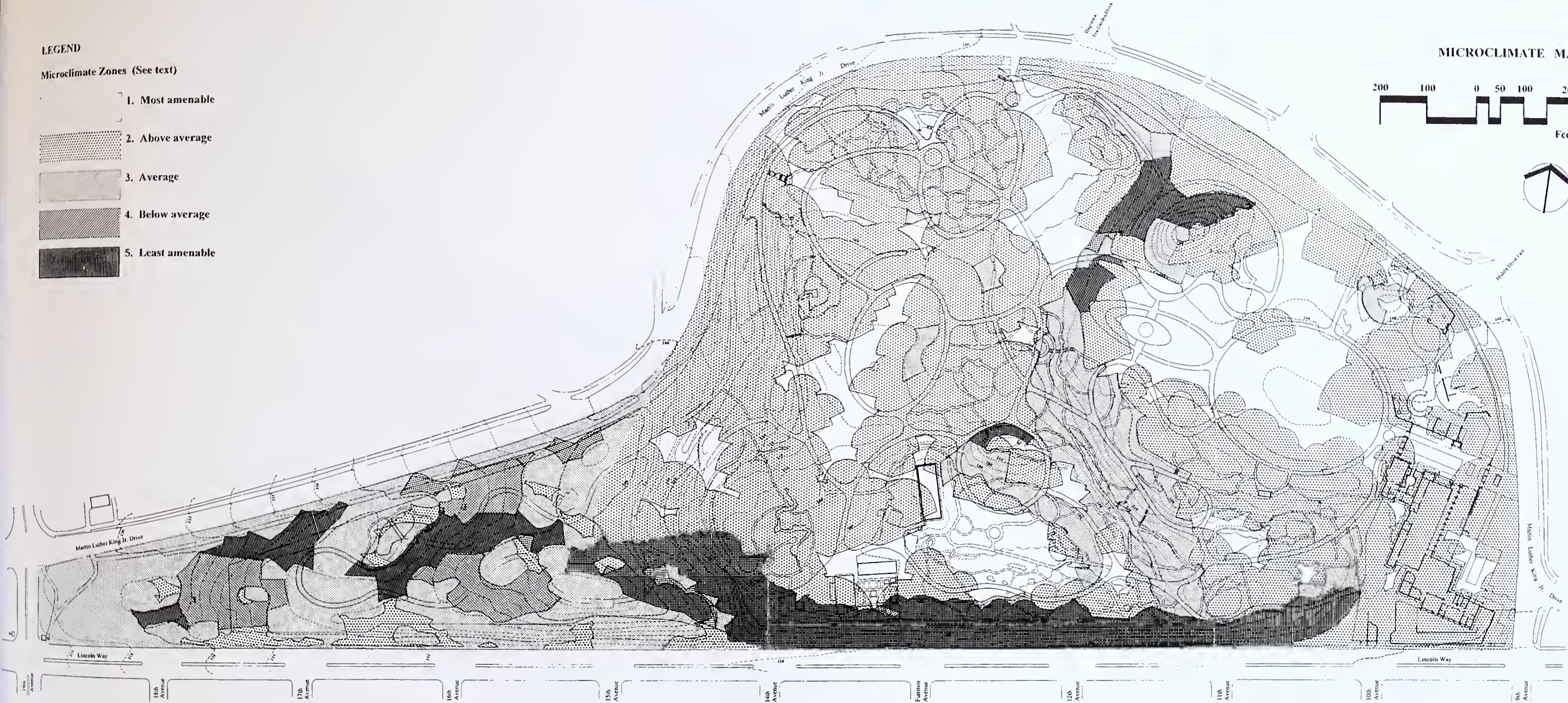
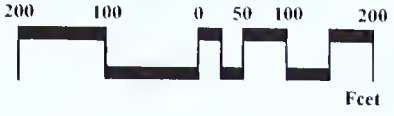
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landscape architects: TITO PATRI & ASSOCIATES
architects: FERNAU & HARTMAN

LEGEND
Microclimate Zones (See text)

- 1. Most amenable
- 2. Above average
- 3. Average
- 4. Below average
- 5. Least amenable

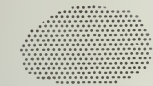
MICROCLIMATE MAP



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LEGEND



Forest replanting or mangement

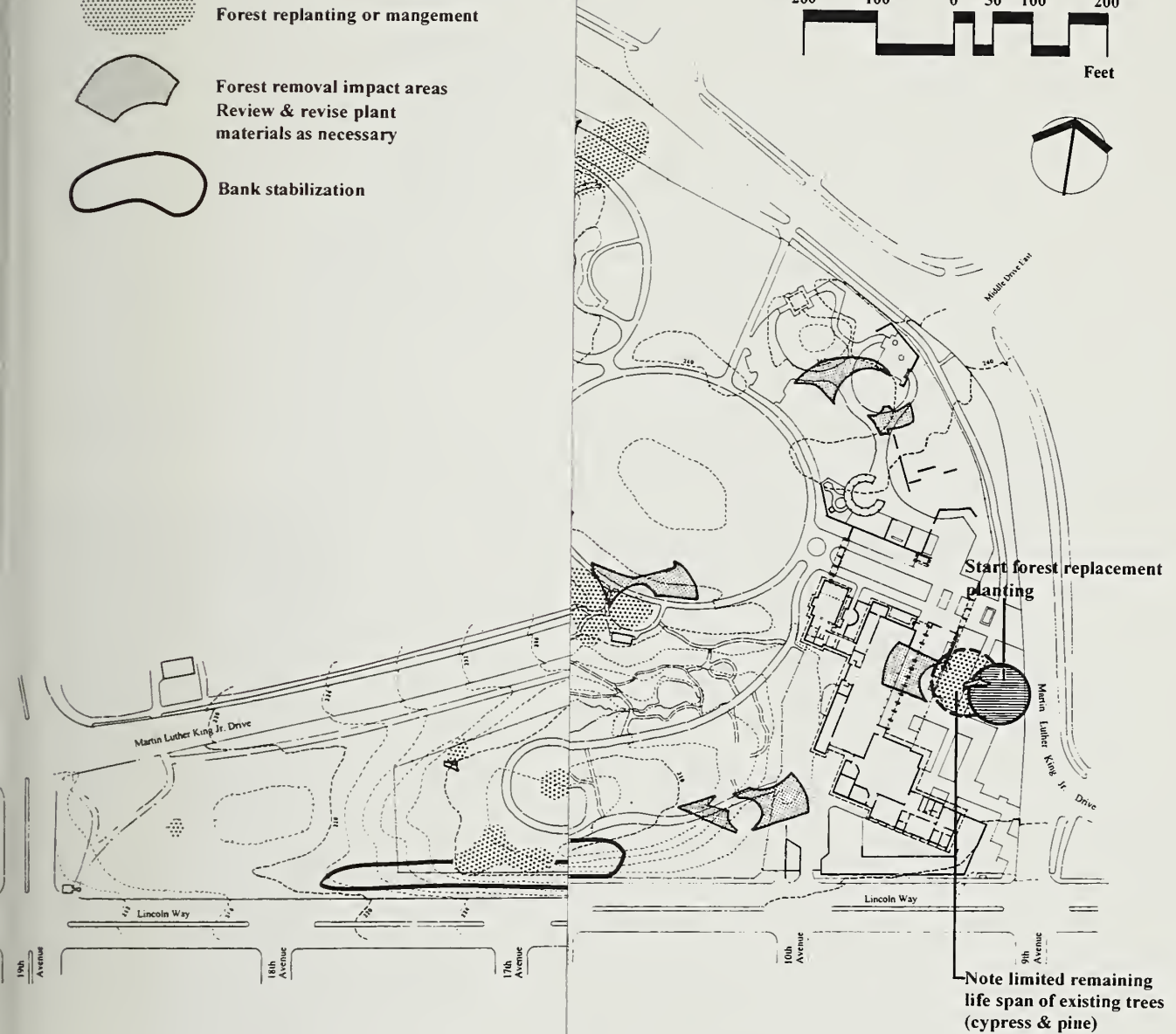
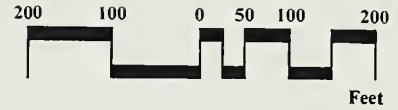


Forest removal impact areas
Review & revise plant
materials as necessary



Bank stabilization

FOREST MANAGEMENT



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LEGEND



Forest replanting or mangement

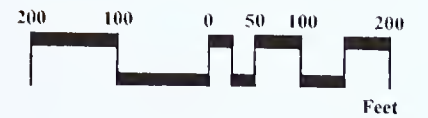


Forest removal impact areas
Review & revise plant
materials as necessary



Bank stabilization

FOREST MANAGEMENT



Eucalyptus windbreak
Manage forest for continued
wind modification

Proposed arboretum

Start forest replacement
planting

Note limited remaining
life span of existing trees
(cypress & pine)



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A diagrammatic work map of average shaded areas based on the criteria above (at summer equinox) at a scale of 1"=40', is available through the Director of SABG.

More detailed microclimate and soil information should be gathered and mapped. The data should include cold-air pockets and drainage and soil characteristics, especially where an adequate profile exists.

The map prepared for this Master Plan must be considered a beginning. As experienced San Francisco gardeners know, exposure conditions may vary within a few feet, suggesting that plants with substantially different levels of tolerance may thrive in close proximity to each other. While the existing map is based in part on land form and mature trees, useful refinements would include the very local effects of shrub masses and adjacent buildings, exposure, reflected light, heat sinks and the like.

An additional benefit to providing this information is that volunteers may use it in educational programs and in responding to questions from visitors regarding the unique problems of gardening in San Francisco soils and climate.

Tree Assessment Mapping



Based on scores of Tree Inventory Data Sheets and Precinct Maps prepared by the San Francisco Recreation & Parks Department Tree Survey Team, several working maps were prepared, all of which will be convenient information sources for future gardener and volunteer efforts. One of the most basic of these is a map of all trees over 20-feet tall which existed as of fall 1994 (therefore including those which fell or were removed during the winter of 1994-95) with an identification number for each tree. There are over 1,200 trees in SABG that are at least 20-feet tall, and/or have a diameter of 6" or greater at the base. Every tree in SABG is marked with a numbered identification tag. Individual assessment sheets for each tree are available through the Department of Recreation & Parks.

The primary purpose of the TPA investigation was to determine what the impacts would be of the removal of the aging cypress and pine trees. In addition, the maps identified all cypress and pine trees more than 80 years old as trees which in the next 10 to 20 years would be removed. This information was used for site-planning and design purposes.

The conclusion of this investigation, resulting in a study map (@ scale 1"=40'), was that the gradual removal of hazardous or aged trees would have far less impact than originally anticipated. Relatively small areas (mostly under one-acre) would be exposed to greater light and these would be scattered throughout the gardens. Six characteristics were employed in the analysis:

- 1) tree type;
- 2) age class;
- 3) height;
- 4) growth class;
- 5) hazard rating;
- 6) shelter value.

The City's Hazard Assessment effort identified the age, height, vigor, species, form and potential drop-limbs of each tree over 20-feet in height based on field observations. The primary basis for the City hazard rating is the potential for a tree to harm people or property. Approximately 25 trees were identified as high-hazard (in other words, dangerous enough to warrant complete removal). Of

these, only five were not coniferous evergreens. Over 60 trees in SABG have been identified as over 80 years old, mostly cypress and pine. Thus, these are within 15 to 20 years of the end of their lifespan. Important reforestation implications are discussed elsewhere. These trees have taken decades to reach their majestic size, imparting striking visual qualities to various meadows and gardens around SABG. The SABG management has already initiated a plan of reforestation to minimize the visual impacts that would otherwise occur with the relatively sudden loss of these 60 trees over the next two decades. This map is available for examination through the office of the Director of SABG.

The City's map system identifies the following tree types graphically (in addition to the i.d. number), as well as dead and removed trees. They are as follows:

- 1) Acacia
- 2) Cupressus;
- 3) Eucalyptus
- 4) Metrosideros;
- 5) Palm;
- 6) Pinus;
- 7) Pittosporum;
- 8) Sequoia
- 9) Ulmus;
- 10) Miscellaneous hardwoods: deciduous;
- 11) Miscellaneous hardwoods: evergreen;
- 12) Miscellaneous softwood.

Forest Management



The overall goal of this element of the master plan -- in keeping with the Golden Gate Park Master Plan, 1994, and in particular the sections on forest management and erosion control -- is to maintain the park-wide forest fabric and canopy of which SABG is an integral part.

This forest, as noted previously, consists largely of Monterey Pine, Monterey Cypress and Blue Gum, which act as windbreak trees as well as stabilizers of the highly sandy soils. In SABG, they provide the basic spatial framework enclosing some of the most elegant and attractive vistas and sylvan open spaces found in Golden Gate Park. The cypress and pine are reaching the end of their natural lifespan and are beginning to die out or be removed in increasing numbers. Little is known about *Eucalyptus globulus*, since its natural lifespan in California is not known (the University of California's Larry Costello has estimated 150 years). However, reforestation of these trees is generally encouraged (notwithstanding the problem of the Pine Pitch Canker which has attacked Monterey Pine in the Monterey and San Francisco Bay regions).

The areas of suggested reforestation shown on the Forest Management Map are based primarily upon the planned removal of trees in accordance with the planning team's interpretation of City Hazard Tree Assessment sheets and plan diagrams. This mapping was done before the 1994/95 winter season during which several major trees were felled. While the felled trees have typically been replaced with one or more of the trees mentioned, the issue of the appropriateness in relation to particular beds or collections needs to be addressed.

The Pine Pitch Canker problem suggests that alternatives to Monterey Pine should be considered. While this plan does not attempt to specify which

alternatives would be most appropriate, it is clear that there are other choices which would maintain the forest canopy and could be considered. These include:

- Bishop Pine (*Pinus muricata*)
- Redwood (*Sequoia sempervirens*)
- Douglas Fir (*Pseudotsuga menziesii*)
- Incense Cedar (*Calocedrus decurrens*)
- Giant Cedar (*Thuja plicata*).

Broad-leafed evergreens which should be considered include:

- Coast Live Oak (*Quercus agrifolia*)
- Tan Oak (*Lithocarpus densiflora*)
- Madrone (*Arbutus menziesii*)
- California Laurel or Bay (*Umbellularia californica*)
- Big Leaf Maple (*Acer macrophyllum*)
- California Sycamore (*Platanus racemosa*)

Reforestation with Monterey Pine (*Pinus radiata*) and Monterey Cypress (*Cupressus macrocarpa*) was started at the west end of the Gardens several years ago and continues to take place as needed.

The forest management map also indicates "forest removal impact areas." These are areas which are currently shaded but would be exposed to greater light with the eventual removal of trees identified by the City survey as hazardous or by the master-planning team as over 80 years old. The implications for change here may be as much related to collection goals as reforestation since the newly exposed areas are generally meadow or shrub areas. Eventual planting decisions will be best made on a case-by-case basis. More detailed understanding of soil conditions, shadows caused by large shrubs and small trees will also play a role in final planting decisions.

Extension of the East Australia collection and a reinforced windbreak of Eucalyptus is proposed on the ridge above elevation 260, just north of 15th Avenue. The current windbreak, consisting of aging *Eucalyptus globulus*, could be reinforced with other varieties of Eucalyptus, including some trees that are smaller at maturity than *Eucalyptus globulus*. This will increase the effectiveness of the windbreak and extend it further in a southwesterly direction toward the new Mediterranean Arboretum as indicated in plan.

Situating the proposed Mediterranean Arboretum on a northwest-facing slope as a divider between the California Coastal Range Habitat Exhibit and the proposed Nursery Complex growing grounds would add wind protection to the latter. The area provides adequate room for laying out different tree species and varieties for comparative or individual study. Research and long-term monitoring of different trees suitable for use in San Francisco would become possible.

At the proposed Main Entry Plaza, three major *Pinus radiata* --highly visible, beautiful signature trees which are over 80 years of age -- present a problem. While they are not yet considered hazard trees by the City, they are not likely to last more than another 20 years. Replacement trees are proposed and shown in the more detailed design proposals described in Chapter 3.

Irrigation

The irrigation system was designed and installed decades ago, long before the development of computer-controlled systems. As a result, a high percentage of gardener time is spent hand-irrigating and "dragging hose" -- a figure which may have been unusually high in the last seven years of drought. Over the years, the collections have slowly evolved or been changed and are now "out of step" with the existing pattern of quick-coupler heads. Often, given San Francisco's moist climate, overhead irrigation adds to the naturally high air moisture encouraging mildew on some plants. Modern drip or subsurface irrigation mats would be preferable for such plants and would reduce maintenance hours substantially.

The City is considering the possibility of using reclaimed water throughout the City's park system. This option should be considered in an irrigation master plan even though apparently the use of reclaimed water is not at present proposed for SABG. It is common to irrigate at night because of concern that there may be contaminants in reclaimed water, and this would be another reason to convert to an automated system which could be run without surveillance at times when the Gardens are closed to the public.

Finally, as a part of bond-issue-funded improvements, the City is currently evaluating the SABG system in anticipation of providing for the replacement of the Thompson heads in the lawn areas and with an automated system. The improvements would include new main lines and valves. The planning for improvements in these selected areas should not be done without consideration of the entire Gardens, since supply lines should be sized to anticipate the location and demands of a future automated system.

The cost opinions prepared for all new planted areas described in this plan assume the installation of an automatic sprinkler system. However, a garden-wide analysis of the existing system and strategies for conversion to an automated system were outside of the scope of the study. Proposals for preparation of a comprehensive irrigation-needs analysis and automated garden-wide system should be solicited from qualified irrigation design firms. The requirements for automatic irrigation of a botanical garden will vary substantially from those of a private garden or even a public park because of the varying needs of different collections or displays. These requirements should be identified and described by SABG staff in conjunction with the irrigation master plan.

Collections: New & Old

In contrast to the more utilitarian needs of linear elements such as roads, paths and fences, this aspect of land use deals with treatment of broad garden areas. The challenge is to work within the fabric of a mature garden without creating visual disharmony and, in the case of new collections, to ensure they can be integrated into the overall fabric.

While the underlying mission of all collections is educational, new proposed collection environments would enhance the high aesthetic standards of the existing gardens. These collections occur either on areas of old gardens (and these are conversions -- as in the case of the Demonstration Gardens) or on new developments at the western end of the Gardens which has seen very little development. The Demonstration Gardens and the World Conservation Garden Exhibits, among other smaller proposed features, are strongly exhibit-oriented and more built-up with benches, directional and interpretive signage and ancillary features such as trash cans and drinking fountains.

LEGEND

33 34

Bed numbers - see text

Collection zones

A

Main/Friend Gate Corridor

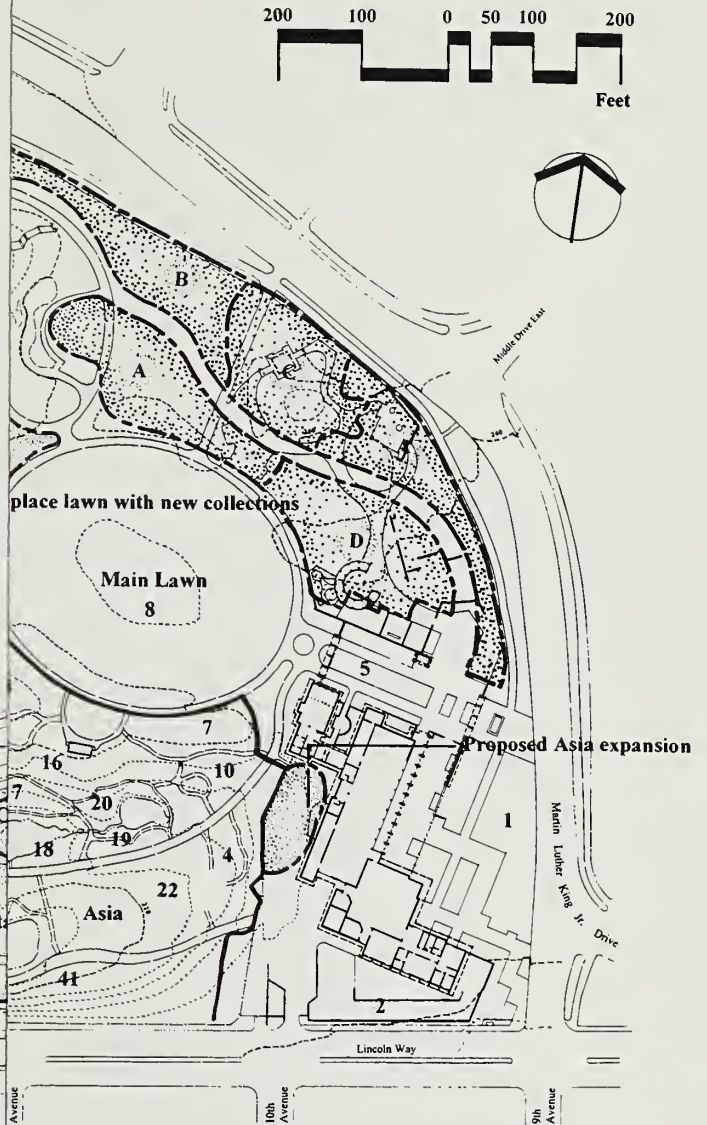
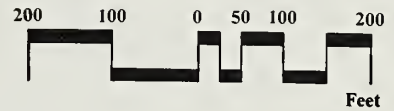
A Demonstration Gardens

B World Conservation Garden Exhibits

C Thomas Church Pavilion & Glade

D Children's Gardens

COLLECTIONS / BEDS MAP



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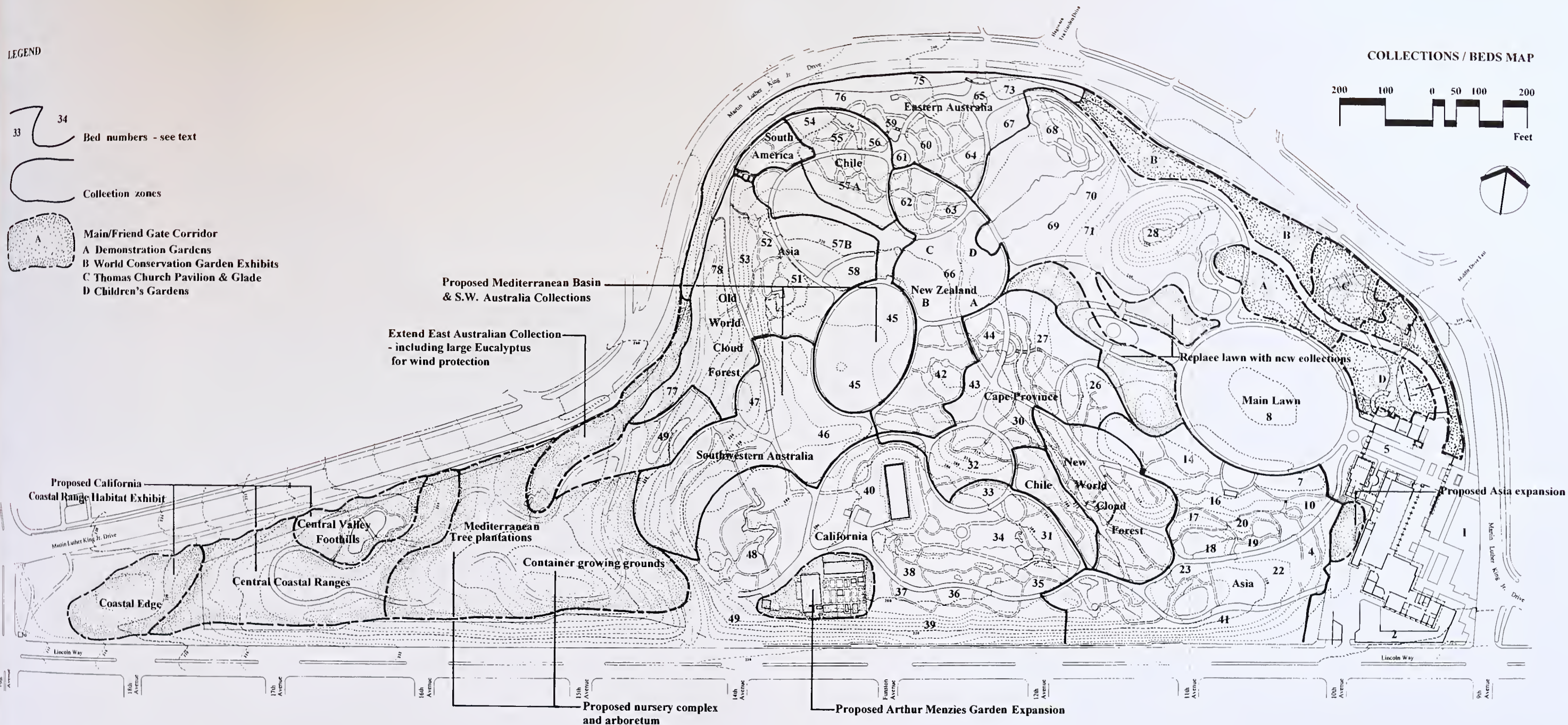
landscape architects:
TITO PATRI & ASSOCIATES

architects:
FERNAU & HARTMAN

LEGEND

- 33 34
Bed numbers - see text
- Collection zones
- A Main/Friend Gate Corridor
A Demonstration Gardens
B World Conservation Garden Exhibits
C Thomas Church Pavilion & Glade
D Children's Gardens

COLLECTIONS / BEDS MAP



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The level of development of those collections with greater emphasis on plants appropriate for the particular theme of the collection will depend on further planning and design studies. These include the already proposed Mediterranean Basin and Southwest Australia Collection and the new collections adjacent to the existing fountain; an extension of the East Australian Collection; expansion of the Arthur Menzies Garden of California Native Plants into the area vacated by the old nursery; plantings associated with the California Coastal Range Habitat Exhibit; and tree plantations in the proposed Mediterranean Arboretum area associated with the Nursery Complex.



In all of these cases, it would be premature at this master-planning level to specify the location of different plant types. More detailed information is needed regarding soil types and the extent and coverage of existing large shrubs and small trees. Information regarding existing sprinkler conditions and potentials for modernized irrigation systems needs to be defined as well. A list of candidate plants for the proposed California Coastal Range Habitat Exhibit is available through the office of the Director of the Gardens. More detailed descriptions of the Demonstration Gardens, the World Conservation Gardens, the Thomas Church Pavilion and Glade and the Education Garden are provided in Chapter 3.

SABG should continue to compile topographic surveys and to gather information regarding soils, shrubs and irrigation potentials in all proposed collection expansion areas. The *Microclimate Map* should be reviewed and refined as necessary. The Gardens administration should conduct workshops for staff and volunteers emphasizing the goals of each collection area where planting can proceed in the absence of new infrastructure or hardscape.

The following list corresponds to the *Collections/Beds Map*:

Bed	Designation
1	Mostly screening plantings (outside arboretum fence)
2	Mixed collection, behind CFB semitropical
3	Demonstration Garden
4	Temperate Asia
5	Perennial Border
6	Erica, Magnolia
7	Temperate Asia
8	Main Lawn
9	Viburnums
10	Temperate Asia
11	Fragrance & Biblical Gardens
12	Crabapples: lawn
13	Crabapples: lawn
14	Temperate Asia
15-21	Dwarf Conifers & Rock Garden
20-23	Temperate Asia
24	Cloud Forest
25 (part)	Cloud Forest
26 A-C	South Africa
26 D	Camellias
27	South Africa
28	Heidelberg Hill (no specific designation)
29	Cloud Forest
30	South Africa

31	California Native
32	South Africa
33-40	California Native
40 E	South Africa
41	Ilex, Temperate Asia
42	New Zealand
43-44	South Africa
45	New Zealand & Conifer Lawn (proposed Mediterranean)
46	Conifer Lawn
47	SW Australia
48	Redwood Grove & SW Australia
49	Rhododendron & Mixed Collections
50 A-E	Succulent Garden
50 F-H	Northern Mexico
51-53	Moon Viewing Garden
53 A-D	Zellerbach Garden
53 (N. of Zellerbach)	South America excluding Chile
54, 55 C-F	Temperate Chile
55 A-B, 56	Mediterranean Chile
57 A	Chile
57B	Temperate Asia
58	Temperate Asia
59	East Australian Rock Garden
60-64	East Australia
65	South America
66	New Zealand
67-69	Primitive Garden
70-73	Rhododendrons
74	Moon Viewing Garden
75-76	East Australia
77-78	Old World Cloud Forest
79-88	Muir Nature Trail

Soils and Bank Stabilization

The original "soils" of SABG are essentially sand, and therefore are highly erodible. Stabilization of several steep (and in some areas eroding) banks is urgently needed. Steep slopes in danger of eroding occur along the north edge of Lincoln Way. These are slopes which have developed very little soil profile and remain highly sandy and more difficult to revegetate. The situation is exacerbated by a lack of irrigation in some areas, particularly the south-facing bank between 14th and 18th Avenues. A very steep north-facing down-slope from 14th Avenue north to 11th is more moist and receives some irrigation (in some cases over-throw) and therefore has a somewhat better vegetative cover. But, growth in this area is inhibited by deep shade of existing trees, shrubs and retaining walls. The steep west- and northwest-facing sides or slopes of Heidelberg Hill are also in need of slope stabilization. Addition of a ramp or path in this area would include special erosion control efforts. The situation in many areas is exacerbated by occasional unauthorized foot traffic down or across these steep slopes -- which breaks through to the thin soil profile and protects the vegetation. Techniques should include the use of soil-binding fabrics which are stapled to the slope and generally are a bio-degradable netting made of coconut fiber or straw encased in two layers of bio-degradable plastic netting. These are available with preseeding, although these are more expensive since the seed would have to meet the requirements of the special soil conditions found

SABG. Manufacturers of erosion control blankets include PPS Packaging Co., Central Fiber Corporation, Phillips Fibers Corporation, North American Green and Bonterra America.

Soil Mapping

A detailed Soils Map should be prepared for the Gardens based on horticultural testing, either on a grid basis or based on physiographic zones plus established vegetation communities. While very little soil profile has been built up at the western end of the Gardens, the build-up of litter and mulch since garden shrub cover was planted has presumably resulted in a pattern of soil types and p.H. levels. Testing could be done by staff or a qualified horticultural soil testing firm.

SPECIAL ACCESS ISSUES

Access To The Gardens and ADA Compliance

Parking and Service



Because of the goals established in the 1994 GG Park Master Plan, with the exception of disabled parking, standard parking should be allowed within the Gardens beyond the numbers that already exist or which have not been approved by the City Recreation and Parks Commission.

Revisions to the existing parking lot adjacent to the CFB reconfigure the existing number of spaces into a more efficient pattern and smaller area (converting approximately 2,700 s.f. of paved area to garden uses) while providing three disabled parking spaces. This will be done in conjunction with reactivating or renovating the more westerly of the two existing gates and by improving the operation and appearance of both.

Parking at the Nursery Complex will be provided for 16 cars with one disabled parking space. This is the same amount and general location associated with the earlier proposals for the New Nursery Complex approved by the City. With the relocation of the Education Center to the CFB area, a single additional parking place has been added to the CFB parking area as recommended by City Planning.

The pedestrian crossing near the Hagiwara Tea Garden should be relocated to the "tee" intersection with MLK, Jr., Drive. Its current location some distance to the west creates a difficult, if not hazardous, situation for pedestrians.

Improved SABG vehicular service routing is needed. Maintenance vehicles (primarily pickup trucks and large trucks) require access to most of the Gardens along pedestrian pathways, and large tractor-trailer type trucks need on-loading and off-loading space at the Nursery. Tractor-trailer access will be provided from Lincoln Way to MLK, Jr., Drive, but there will be no turn-around space at the Nursery Complex. This will eliminate the current heavy service traffic from the existing parking lot past the Asia and California gardens to the existing Nursery Complex, allowing conversion of a portion of this route to pedestrian and minimal maintenance access only. All Types A and B pathways will be 12-foot wide, standard asphaltic concrete pavement with reinforced edges to allow for heavy vehicles as well as emergency and police vehicles if necessary.

SABG should continue to work with City agencies responsible for ADA compliance and toward the design goals of this Master Plan relating to greater access.

ADA Compliance

A major issue is that of compliance with the standards of the Americans with Disabilities Act of 1990. As a part of studies conducted throughout the City parks, the firm of Moore, Icafano and Goltsman (MIG) identified noncomplying conditions in the CFB and at pathway locations throughout the gardens. The study was followed by a more specific identification of "fixes," and associated cost estimates for those locations were prepared by The Architects' Collaborative (TAC). These reports and a map detailing these areas are available for examination through the office of the Garden Director. ADA standards, as applied to parks, open spaces and nature reserves, are not nearly as fixed nor as complete as those standards associated with buildings. This is because in many outdoor situations, compliance would cause an unreasonable hardship on the responsible agencies or such devastating impacts to the natural environment that the original attraction, particularly in landscape settings, might be compromised. The California Accessibility Reference Manual of 1994 states that

"where the enforcing agency finds that in specific areas the natural environment would be materially damaged by compliance with these regulations, such areas shall be subject to these regulations only to the extent that such material damage would not occur."

Furthermore,

"Paths of travel shall not be made accessible when the enforcing agency determines that compliance with these regulations would create an unreasonable hardship."

With respect to nature trails and paths, the manual suggests that these be constructed with

"gradients which will permit at least partial use by wheelchair occupants. Nature trails and similar educational and informational areas (our emphasis) shall be accessible to the blind."

The section on signage in Chapter 4 discusses treatments for this latter case.

The studies by MIG and TAC were conducted before preparation of the accompanying circulation and parking map and without the benefit of statistics on the visitation levels to specific features within the Gardens. This plan responds to those two studies by providing routes to primary attractions which avoid existing steep pathway sections. The specific design characteristics of these pathways are explained in Chapter 4. Also, the Promenade and Path Types A and B will be accessible to normal maintenance vehicles (pickup trucks) and Type C to small electrical maintenance and garden vehicles. The general criteria for the path types are as follows:

Promenade and Type A: All-weather paved with special unit pavement and edging, limited use by maintenance vehicles, emergency/security route:

- 100% ADA accessible;





- Encounters majority of significant places and features as well as all temperate continent collections;
- Provides access for a general overview of the main features and major aesthetic experiences of the Gardens;
- Provides a sense of orientation throughout the Gardens.

Path Type B: All-weather paved and edged, preferred route for maintenance and service vehicles:

- Alternative through-route for those familiar with the Gardens -- i.e. short-cut to key features and *not* ADA accessible along all segments;
- A route to important but under-appreciated collections or attractive to a smaller audience (e.g. garden enthusiasts with narrowly focused interests).

Path Type C: All-weather paved, narrower than the Promenade and Types A and B, possible for small electric maintenance vehicles:

- Short internal access paths, not through-routes;
- ADA accessible *only* along certain limited segments.

Path Type D: Stable compacted granular paving suitable only for small electric and handdrawn carts, width similar to Path Type C:

- ADA accessibility not feasible;
- Used primarily by gardeners, volunteers and those with special garden interests.

The Circulation and Parking Plan proposes to address ADA noncompliance reaches wherever they are covariant with the proposed path hierarchy.

Wheelchair & Other

Access Goals

Wheelchair curb cuts are shown in five locations along MLK, Jr., Drive, two of

which double as service entrances. The other three are associated with disabled parking zones (blue curb) adjacent to the three main gates. Ramps within the Nursery Complex, from the main parking lot (where HC parking will be provided) will not exceed 5% -- meaning there will be access between the three levels involved connecting the headhouse, greenhouses and shade house and growing grounds. Accessible after-hours turnstile exit gates should be installed at Main Gate, Friend Gate and the West Gate.

SECURITY ISSUES

Lack of adequate security (leading to some thefts) has been a problem, particularly toward the west end of the gardens where deteriorating chain link fencing is largely set back and hidden from Lincoln Way by tall shrubbery. Another weak link in the security fencing occurs at the stone wall which was part of the former Demonstration Gardens (opposite the eastern intersection of Middle Drive with MLK, Jr., Drive). In addition to these security gaps, much of the fencing is simply old and in need of replacement. The area of responsibility for SABG has recently expanded (adding approximately 5.8-acres) therefore creating a need to extend new six-foot-high fencing further west linking a west-end gate near 19th Avenue.

New six-foot-high fencing will be required around the New Nursery Complex, as well as new gates at Lincoln Way to provide staff, volunteer and service truck access. The fencing proposed between Main Gate and Friend Gate would be designed as an architectural screen (as distinguished from the remainder of fencing which would be vinyl-clad chain link fencing). Two short sections of matching architectural screen would flank the new proposed West Gate.

Existing fencing around the reservoir may be structurally inadequate but could also be considered a hazard because it is largely hidden from view from nearby pathways and therefore from supervision by authorized staff. The area would be redesigned and the fence relocated in connection with conversion of this feature to a water conservation exhibit.

Two alternatives are proposed for fencing along Lincoln Way between 14th and 19th Avenues. The rationale for providing a new fence closer to Lincoln Way (Alternative 2) is that bringing the fence closer will make it somewhat more visible from the street, thus deterring people from climbing over. Alternative 1 leaves the fence in place but with repairs.

There are opportunities along MLK, Jr., Drive to expand fencing outward and closer to the existing pedestrian sidewalk encompassing more of the vegetation currently outside the existing fence. This will make it easier for gardeners to maintain the vegetation that is visually part of the Gardens and reduce security problems by making the fencing more visible.

Seven service entrances are proposed:

- 1) West Gate;
- 2) Friend Gate;
- 3) Main Gate;
- 4) To the Nursery Complex off Lincoln Way (one-way in);
- 5) North of the Nursery Complex (one-way exit onto MLK, Jr., Drive);
- 6) Adjacent to the Thomas Church Pavilion;
- 7) At the CFB parking area.

All of these are provided with curb cuts and double gates, providing a twelve-foot opening, except at the Main Gate where a single twelve-foot-wide sliding-gate panel will be provided.



Gardener Service Zones

Maintenance costs could be minimized by developing a mapped zonal system for distribution of responsibilities throughout the Gardens. The tool sheds which gardeners rely on should be at the center of each of these zones. The sheds are of various sizes and ages and presumably of varying usefulness. Some are large enough to provide short-term shelter in case of rain. Zones, presently only informally defined, reflect the existing pattern of collections. New zone configurations should be based on maintenance complexity.

The area that one gardener can maintain in a given period should be a relatively fixed number. The Gardens could be divided into zones reflecting the complexity of maintenance and designating areas appropriate for one full-time gardener. This should be delineated on a Master Plan base map. Thus, regardless of the fluctuation of City-supplied gardeners in the future, it would be possible to calculate and plan for the necessary hours of volunteer time to meet the desired maintenance levels for each zone.

A toolbox location could be established at the functional center of each zone for greatest efficiency. Existing sheds should be phased out (they are out of character with surrounding gardens) and replaced with low waterproof toolboxes which could be more easily screened. Dimensions should allow for long hand tools (shovels, rakes, etc.) and they should be portable. Prefabricated lockable fiberglass units may be appropriate. Tool-storage rooms with separate exterior access should be included in the designs for public restrooms at the Education Center, Friend Garden and the relocated Nursery Complex.





*Project
Cost Opinions &
Funding Issues*

CHAPTER 6

PROJECT COST OPINIONS & FUNDING ISSUES

Cost Opinion Summary

The cost categories that follow include both landscape and architectural elements presented in 1995 dollars and are separated for the most part as different elements of buildings or zones within the Gardens. Because of factors such as the generality of master plan level and schematic drawings and the unpredictability of future market conditions, these opinions should not be confused with contract-document/ working-drawing level construction cost estimates. The prices may change, since they *do not* include allowances for inflation or a "market contingency." Professional estimators for the CFB suggest the following percentages for allowances and contingencies. Items #1 and #2 are included (compounded) in the cost opinions.

1)	General Conditions	12%
2)	General Contractor Profit and Overhead	6%
3)	Five-year Market Contingency	30%

Since the potential increase (almost 50%) is significant, consideration of these important factors should be reflected in the translation of construction cost figures into fundraising goals. On a more positive side, these figures do not account for the cost savings associated with the considerable volunteer input which supporters of SABG are expected to bring to this process. These numbers also do not include fees of designers, engineers, other consultants, permits or environmental studies.

With respect to planted areas, the figures given assume the installation of modern computer-controlled irrigation. In this respect, the level of irrigation improvements potentially paid for by City bond issue monies has not been calculated. The figures given may be appropriate as general goals, especially with respect to fundraising, but should not be considered as final or totally reliable cost estimates.

Alternatives

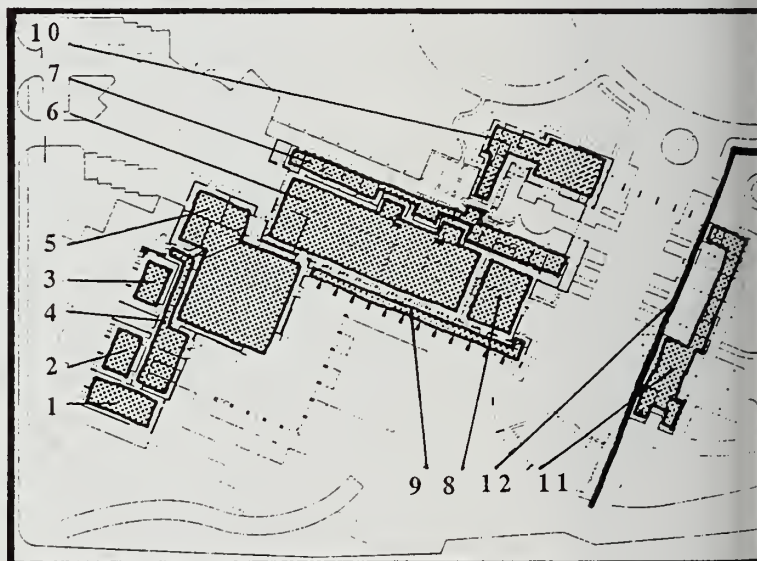
Each of the numbered areas is discussed in Chapters 2, 3 and 4 providing descriptive information to supplement planning or design-level graphics. In several cases, as, for example, in the discussion of pathway cross sections, a less costly alternative is discussed and illustrated. These "alternative" cost opinions are not presented in this summary, but are included in the more detailed cost breakdown which will be transmitted to the Office of the Director of SABG as an integral part of this Master Plan.

These figures include a 10% contractor's profit and overhead in the case of landscape work and 6% associated with building projects. An allowance of 12% in the case of buildings is also included for General Conditions. The latter allowance is not applied to landscape work because of the difficulty in estimating the impact of volunteer input.

Preliminary Cost Opinion Summary

1.0 CFB & Education Center

No.	ITEM	BASE COST
.1	New Rental Room	\$197,000.00
.2	Old Library Room	\$166,000.00
.3	Recreation Room	\$175,000.00
.4	Rental Wing Entry	\$158,000.00
.5	Auditorium	\$1,083,000.00
.6	Gallery	\$1,001,000.00
.7	SAS Administrative Offices (incl. arbor)	\$875,000.00
.8	Orientation Center/Bookstore	\$370,000.00
.9	Cafe (including covered walk)	\$422,000.00
.10	H. Crocker Russell Library (incl. basement)	\$827,000.00
.11	Education Center	\$694,000.00
.12	Education Wall	\$260,000.00
CFB SUBTOTAL		\$6,228,000.00



Each of the 12 building areas listed above is supported by such elements hallways, storage, restrooms, new roofing, heating improvements, etc. Thus, the figures include specific costs related to the individual areas as well as over building renovation or "unassigned" costs (including ADA upgrades and asbestos removal), prorated to reflect room square footages and the complexity of the renovation proposed for each area. They do not reflect the addition of a 30% Market Contingency, which should be added for budget planning purposes. Unassigned costs are distributed proportionately among the figures listed above.

2.0 Nursery Complex

(Note: Site development and improvement cost opinions are included in Section 3.0 Gardens under the title "Nursery Complex and Grounds.")

No.	ITEM	BASE COST
.1	Headhouse	\$505,000.00
.2	Potting shed	\$73,000.00
.3	Shade house	\$284,000.00
.4	Garage	\$72,000.00
.5	Greenhouses	<u>\$488,000.00</u>
NURSERY COMPLEX SUBTOTAL		\$1,422,000.00

Note: Because of the limited level of detail associated with the study of the Nursery Complex, unassigned costs were not determinable.

3.0 Gardens:

No.	ITEM	BASE COST
.1	Main Entry Plaza	
.1.1	Main Entry	\$1,241,257.50
.1.2	Auditorium Courtyard	\$380,365.60
.2	Esplanade	\$205,882.50
.3	Golden Gate Park Entry Plaza	n/a
.4	South Terrace	\$122,433.00
.5	Lincoln Service Gate & Parking Area	\$46,656.20
.6	Library Courtyard	\$44,584.30
.7	Library Garden	\$73,137.50
.8	Asia Collection Expansion	\$102,903.10
.9	Children's Garden	\$276,975.60
.10	Demonstration Gardens	\$138,465.00
.11	Thomas Church Pavilion & Glade	\$121,056.80
.12	North Service Gate & Yard	\$47,852.50
.13	World Conservation Garden Exhibits	\$252,451.20
.14	Heidelberg Hill Overlook	\$96,531.80
.15	New Collections at Tetlow Fountain	\$251,613.70
.16	Tetlow Fountain Renovation	\$108,331.20
.17	Rock Gard., Water Cascade & Overlook	\$253,415.60
.18	Strybing Bench & Pond	\$62,375.00
.19	McBean Wildfowl Pond	\$138,875.00
.20	Friend Gate Renovation	\$427,250.60
.21	Arthur Menzies Garden Expansion	\$266,037.50
.22	Water Resource Conservation Exhibit	\$176,690.60
.23	Redwood Trail Forest Exhibit	\$16,250.00
.24	Malesian Rhododendron Exhibit	\$66,712.50
.25	Nursery Complex & Grounds	\$724,003.00
.26	Mediterranean Arboretum	\$407,500.00
.27	California Coastal Range Habitat Exhibit	\$1,911,835.00
.28	Mediterranean Basin Collection	\$315,500.00
.29	Southwest Australia Collection	\$250,406.20
.30	West Gate	\$146,652.50
.31	Glimpse Gates	\$46,333.00
.32	Promenade	\$243,200.00
.33	Path Type A: New Construction	\$77,600.00
.34	Upgraded Path Type A	\$385,920.00
.35	Path Type B: Rerouted Paths	\$5,640.00
.36	Upgraded Path Type B	\$209,280.00
.37	Removal Of Existing Paths	\$10,600.00
.38	Downgrading To Path Type D	\$5,320.00
.39	Miscellaneous Fencing & Walls	\$824,335.00
.40	Signage	\$19,100.00
.41	Miscellaneous Furnishings	\$126,500.00
	GARDENS SUBTOTAL	\$10,627,829.60

Note: Costs of offsite utilities supplying or serving the areas listed are not included.

Potential 1992 Bond Issue Funds

A significant number of improvements and repairs within SABG could be funded to some degree through the recent bond issue (1992). The items are listed below. Total or itemized amounts to be allocated are not known at this time and the list of items covered is subject to change.

The items marked with an asterisk are specifically listed in the August 1994 Golden Gate park Master Plan as potentially receiving allocations from the 1992 Bond measure, but not necessarily within SABG.

CFB:

Asbestos treatment;

ADA signage;

- * Restroom upgrades to meet ADA standards.

GARDENS:

- * Park entry signs;
- * 9th & Lincoln - entry improvements;
- * Stairs, paths and accessibility improvements (presumably to meet ADA standards);
- Fencing repairs;
- Pond construction and repairs;
- * Irrigation control & distribution: Replacement of existing with an automated system at major lawn areas;
- * Park feature signs;
- Water mains and distribution;
- * Sewerage and drainage improvements;
- * Lighting (assumed limited to security lighting);
- * Reforestation (additional forestry staff, materials, supplies);
- Erosion control and bank planting;
- * Underground reservoir reconstruction;
- * Refurbish wells and pumps;
- * CAD mapping of trees;
- * Curbing;
- Lakes & ponds & water courses;
- Drinking fountains.

Fundable Components/ Targets



Like many cultural institutions in urban areas throughout the U.S., SABG facing increasing operating costs and decreasing support from the City. At same time, the Gardens have embarked on an ambitious and worthwhile plan to better serve a broader cross section of San Francisco's community. If SABG is to meet this challenge, its supporters must find new means of long-term garden sustenance.

This Master Plan has described the new and renewable components of the Gardens (buildings and grounds) as a series of funding targets. They range widely in size, complexity and potential cost. Smaller donations might include benches, drinking fountains, etc. At the same time, searching for a donor for construction of an entire building wing such as the Education Center would be unreasonable. The breakdown into fundable "bites" is not arbitrary; it reflects, particularly in the Gardens, logical design and construction components.

Matching these components with potential donor organizations or individuals will require more research. Reaching the potential support audience could be made more efficient by the provision of better Garden-user-profile data. The garden counts and interviews conducted in the early stages of this study illustrate a wide variety of visitors to SABG, including international visitors, students, professional and amateur gardeners, horticultural specialists and environmentalists from, in all likelihood, a range of economic backgrounds. This limited study needs to be expanded and refined so that SABG can describe its "users" and therefore its "market." This should assist funding organizations in their decisions regarding SABG.

SABG should refine and expand its visitor survey by periodically taking garden counts and conducting interviews over the next two to three years. The counts and interviews should take place at different times of day and, importantly, during different seasons to reflect the potentially important effect of the local climate on visitation. This information should be compared with similar profiles compiled from organized user groups from the various school groups and institutions throughout the City and the Bay Area. SAS's plans to raise the profile of the Gardens in terms of attractiveness and the importance of its role in the Bay Area's educational community will also benefit from such an effort.

Landscape Maintenance Endowments

Since the City may not continue to provide adequate levels of maintenance staff, a system allowing support through maintenance endowments should be initiated, both for the Gardens and for architectural components. The endowment campaign should be linked with the fundraising goals for construction costs.

Monies needed for the maintenance of the proposed new and existing landscape features can be anticipated by reviewing the construction cost opinions for the proposed features and the recent maintenance history of the Gardens. Construction costs are typically a one-time expense that do not include maintenance costs. However, all building or landscape improvements carry on-going maintenance costs which are often overlooked in fundraising.

Principal maintenance for the Gardens has historically been provided by City-employed gardeners. Nine City gardeners (approximately a 50% reduction from a decade ago) along with many volunteers maintain the grounds today. As the number of gardeners has decreased, and their maintenance burden increased, the development of new landscape improvements will only add to their

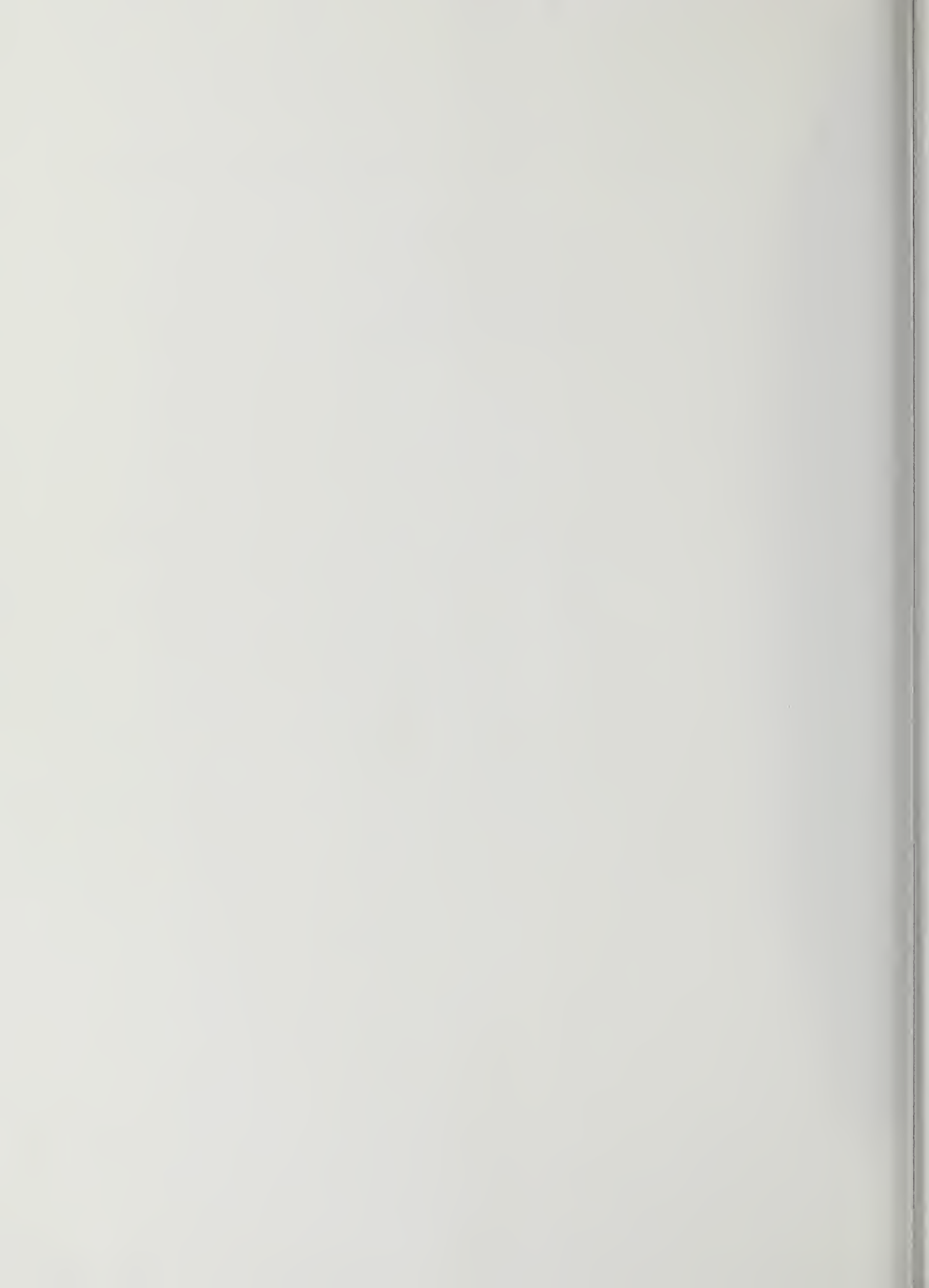
responsibilities. As noted, the SAS volunteers contribute tremendously to the upkeep of the grounds. However, because their efforts are related to educational programs, it is difficult to estimate to what extent their efforts can make up for the loss of City gardeners -- especially given the significant expansion of collections proposed in the Master Plan. It would be safer to assume that with the proposed landscape improvements, more trained full-time staff gardeners will be needed. Barring further reductions in City funding, an additional five to ten gardeners would be needed in addition to increased volunteer support. A maintenance endowment fund, together with a cooperative agreement with the City, is one alternative to secure monies for employed gardeners.

In one example of a successful cooperative grant agreement, a local nonprofit organization provided an annual grant equivalent to the salary and benefits of one full-time City-employed gardener (approximately \$50,000) plus monies for maintenance equipment and supplies. To support the grant, the organization conservatively estimated that a 5% return on a one million dollar (\$1,000,000) endowment fund would provide the annual grant monies for the position. Based on this model, 10 full-time gardener positions would require an endowment of \$10 million.

Further research regarding maintenance costs ratios to different garden conditions should be conducted with the cooperation of the SABG development coordinator. The resultant information should be made part of the endowment or funding information supplied to potential donors.

Any capital campaign to raise funds for the construction of proposed Garden improvements should incorporate contributions to a maintenance endowment. A good "rule of thumb" calculation would be to double the amount of the capital funds sought to generate support for a maintenance endowment.

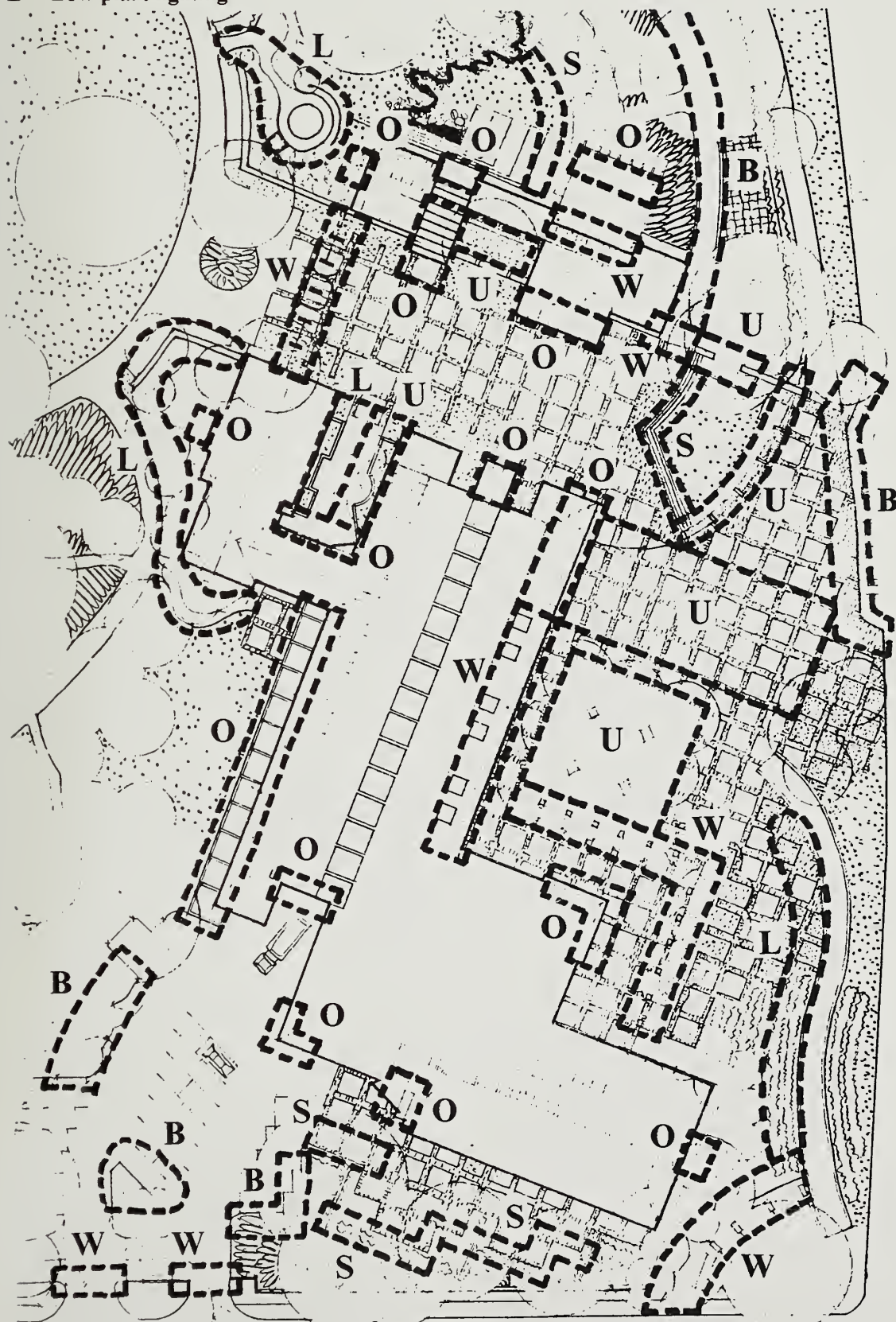
***Appendix:
Schematic
Utility Plans***



Legend

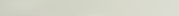








- B -- Bollard or low std.
- O -- Overhead lighting
- W -- Wall or column Light
- U -- Uplamp
- S -- Steplight
- L -- Low plant lighting




SCHEMATIC LIGHTING PLAN



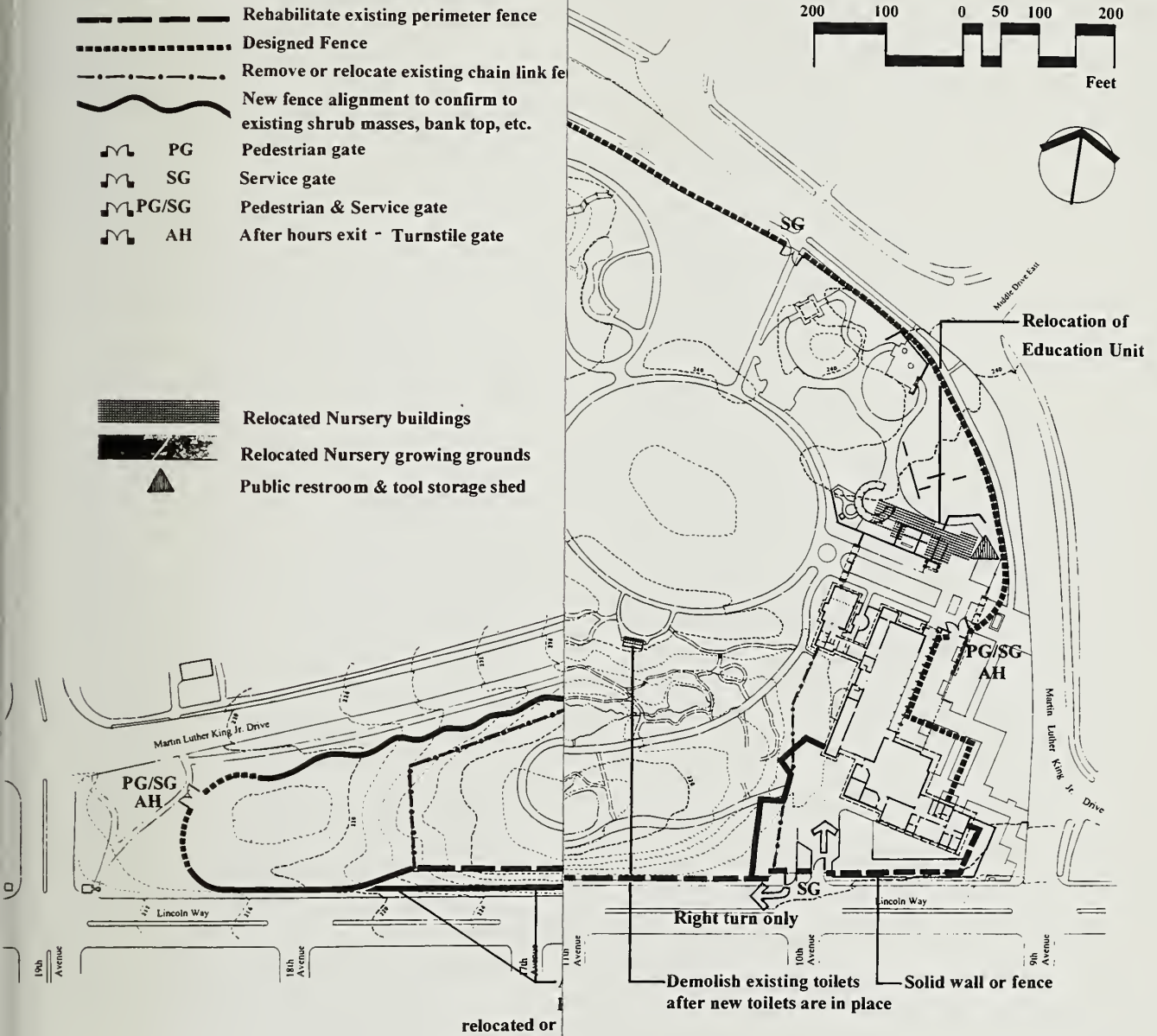
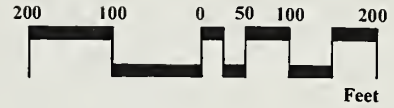


LEGEND

-  New alignment chain link fencing
-  Rehabilitate existing perimeter fence
-  Designed Fence
-  Remove or relocate existing chain link fence
-  New fence alignment to confirm to existing shrub masses, bank top, etc.
-  PG Pedestrian gate
-  SG Service gate
-  PG/SG Pedestrian & Service gate
-  AH After hours exit - Turnstile gate

-  Relocated Nursery buildings
-  Relocated Nursery growing grounds
-  Public restroom & tool storage shed

FENCES & GATES



MASTER PLAN

STRYBING ARBORETUM & BOTANICAL GARDENS

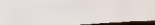




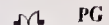
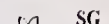

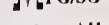
San Francisco, California




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landscape architects:
TITO PATRI & ASSOCIATES

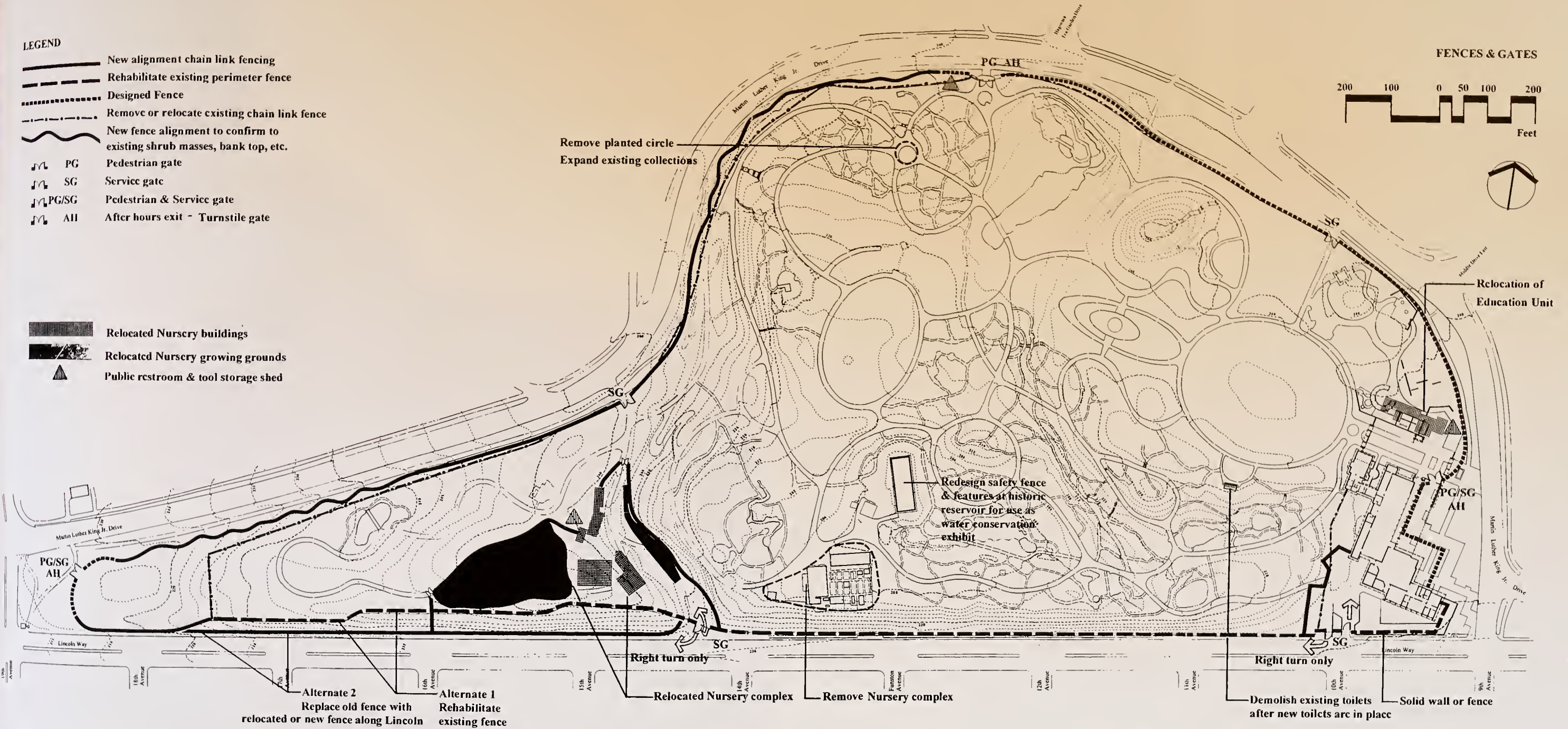
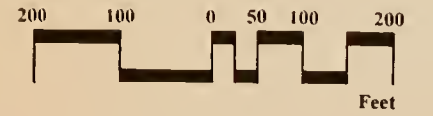
architects:
FERNAU & HARTMAN

LEGEND

-  New alignment chain link fencing
-  Rehabilitate existing perimeter fence
-  Designed Fence
-  Remove or relocate existing chain link fence
-  New fence alignment to confirm to existing shrub masses, bank top, etc.
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-  PG/SG Pedestrian & Service gate
-  AH After hours exit - Turnstile gate

-  Relocated Nursery buildings
-  Relocated Nursery growing grounds
-  Public restroom & tool storage shed





FENCES & GATES



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architects:
FERNAU & HARTMAN

SCHEMATIC LIGHTING LEGEND

-  Wall mount fluorescent uplight valence and up/down valence
-  "Feature" pendent mount fluorescent (downlight in suspended wood panel and up/down in Gallery)
-  "Basic" surface mount fluorescent downlight
-  Concealed surface mount fluorescent uplight



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


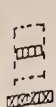







SCHEMATIC LIGHTING PLAN

20 0 10

Feet



SCHEMATIC LIGHTING LEGEND

- | | | |
|---|---|--|
|  Wall mount fluorescent uplight valence and up/down valence |  "Basic" recessed fluorescent can downlight and wall washer |  Exterior "feature" overhead light, metal halide (interior @ Education Wing Greenhouse, Cafe) |
|  "Feature" pendent mount fluorescent (downlight in suspended wood panel and up/down in Gallery) |  Track mounted spot or floodlight |  Exterior tree or sign light (used @ interior of classroom) |
|  "Basic" surface mount fluorescent downlight |  Interior "feature" incandescent pendent fixture |  Interior "feature" fluorescent pendent |
|  Concealed surface mount fluorescent uplight |  Exterior "landscape" light, Appleton type (horizontal and vertical mount) | |



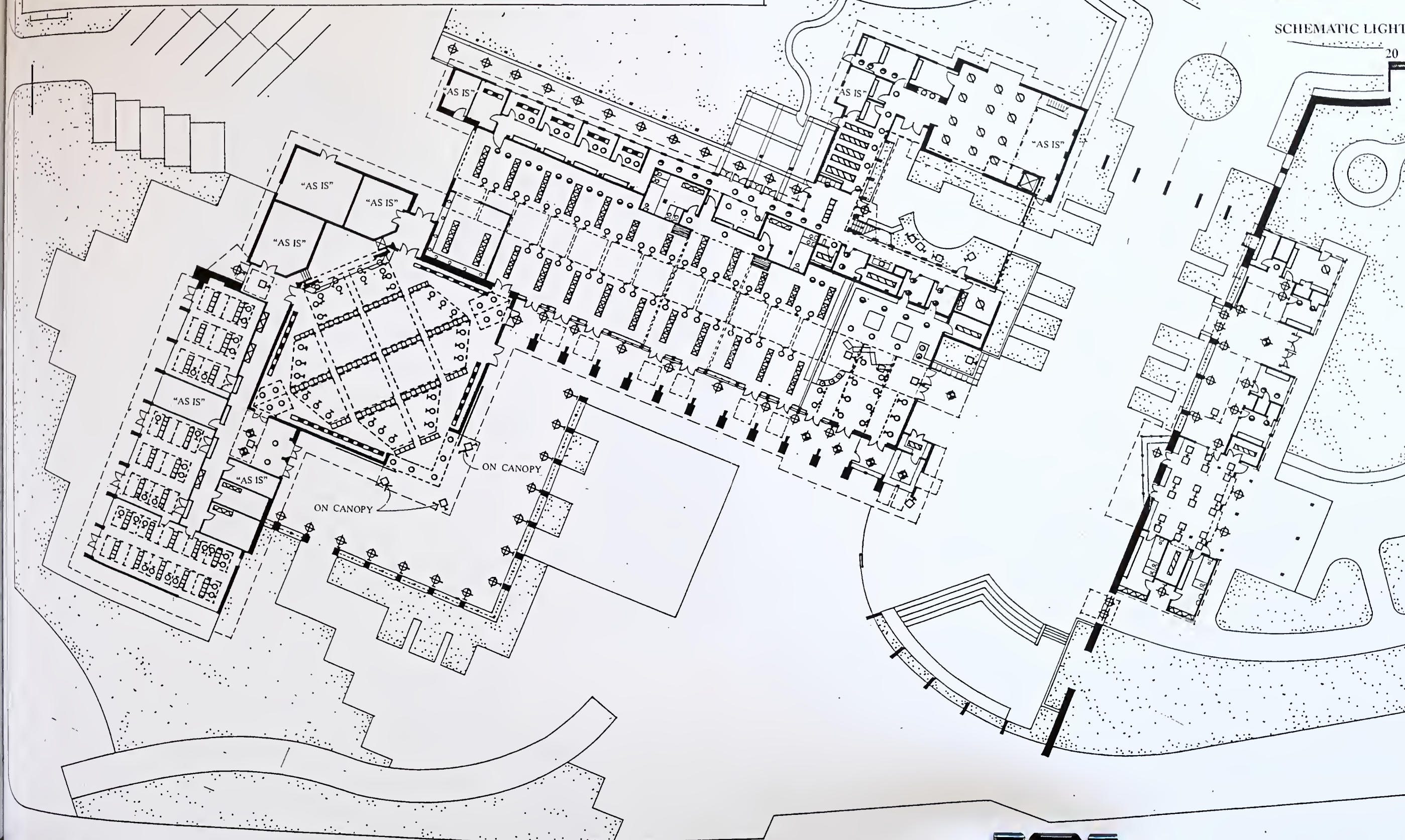
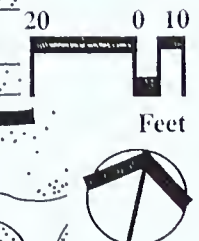
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LANDSCAPE ARCHITECTS:
TITO PATRI & ASSOCIATES

ARCHITECTS:
FERNAU & HARTMAN

SCHEMATIC LIGHTING PLAN



MECHANICAL ZONING LEGEND



Zone 1 - Forced air/ hot water coil system heated by new boiler behind Auditorium



Zone 1a - Hydronic radiator system heated by new boiler behind Auditorium



Zone 2 - Forced air/ hot water coil system heated by new boiler behind Gallery



Zone 2a - Hydronic radiator system heated by new boiler behind Gallery



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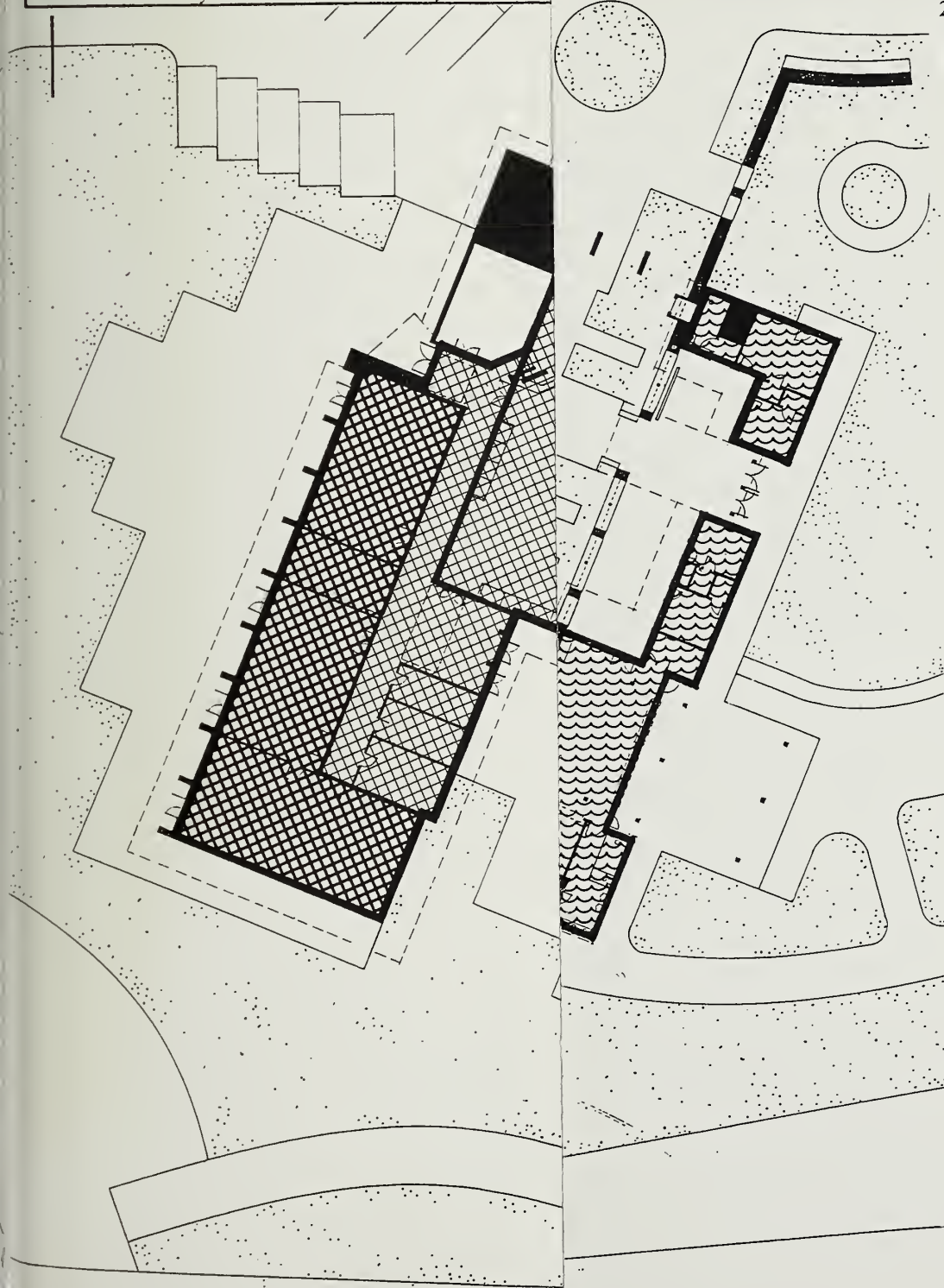
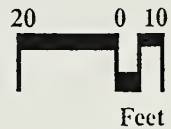
landscape architects:

TITO PATRÍ & ASSOCIATES





architects:





FERNAU & HARTMAN

MECHANICAL ZONING DIAGRAM



MECHANICAL ZONING LEGEND

-  Zone 1 - Forced air/ hot water coil system heated by new boiler behind Auditorium
-  Zone 1a - Hydronic radiator system heated by new boiler behind Auditorium
-  Zone 2 - Forced air/ hot water coil system heated by new boiler behind Gallery
-  Zone 2a - Hydronic radiator system heated by new boiler behind Gallery

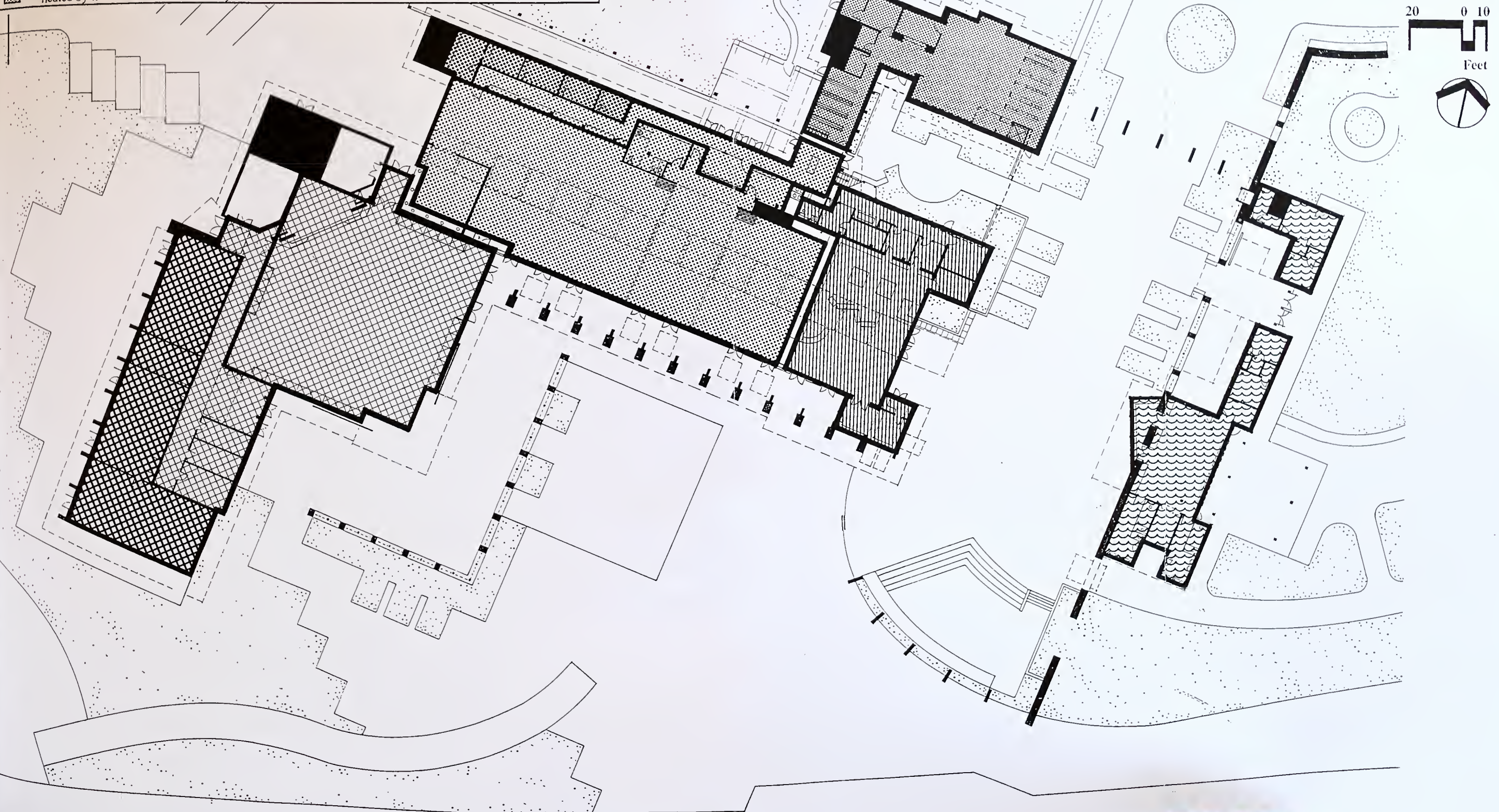
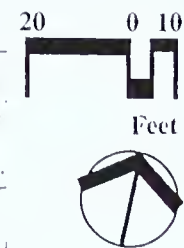
-  Zone 3 - Fan coil system heated by new unit above public bathroom
-  Zone 4 - Existing fan system to remain. Provide new transfer ducts for improved circulation.
-  Zone 5 - New radiant slab hydronic heating system
-  Existing or proposed Mechanical Room (One per Zone)



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MECHANICAL ZONING DIAGRAM



20 RB
Smash
2







